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P R E F A C E.

IT is the object of this manual to supply, for popular use, the requisite amount of information on the construction of the human frame, the form and position of its various parts, the nature of its tissues and organs, and especially of the different functions on the due performance of which depend the health and vigour of the whole system; and also to impart, in a simple form, useful knowledge of the various diseases which "flesh is heir to," and of those remedies with which it is desirable a non-professional person should be practically acquainted, and able to apply on emergencies. The aim has been to produce a book that shall be in very truth the "Family Doctor," suitable for ready reference in all those numerous cases in which it is unnecessary or impracticable to obtain the assistance of a Surgeon or Physician, whose aid should ever be sought when there is really an occasion for it.

There is at present no lack of works professing to have the same object in view; but they are mostly large and costly, and do not come within the means of the many, to whom such information is useful; and, generally speaking, they are too professional and technical to be of much service to the large class for whom this work is specially intended. Our aim is utility, in its widest signification: therefore we write simply, and explain as we go, troubling our readers as little as may be with hard scientific names, and, where *obliged* to do this, pointing out their meaning in the plainest terms.

The information conveyed in these pages is thoroughly practical, and such as may be depended on: it is the result of much study and research. The author has not relied on his own experience simply, but has made it a point to consult the most recent and eminent authorities, so as to give a complete digest and compendium of the present state of medical, surgical, and sanitary science.



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THE FAMILY DOCTOR:

AN ENCYCLOPÆDIA OF DOMESTIC MEDICINE.

A. A. A. A chemical abbreviation of *amalgama*, meaning to mix or amalgamate, sometimes used in *Prescriptions*: which see.

ABAPTISTON (from the Greek *abaptizo*, *not* to plunge). The perforating part of an instrument used for opening the cranium, which has the form of a truncated cone, to prevent its plunging into the brain. See *Trephine*.

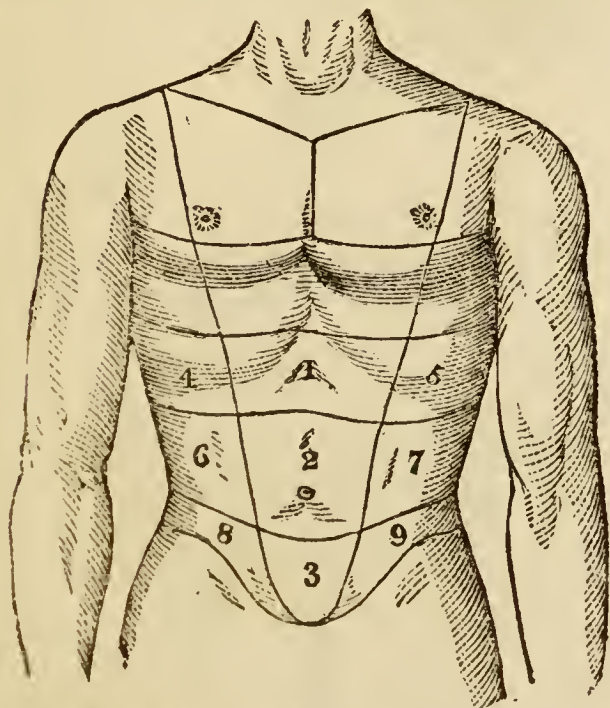
ABARTICULATUM (from the Latin *ab* from, *articulus* a joint). The connection or jointure of two bones is called the *articulation*, and where this joint may be seen to move, as in the knee or knuckle, the above is the term used. See *Diarthrosis*.

ABDOMEN (from the Latin *Abdo.* to hide). This is the lower venter, or belly, containing the stomach, intestines, liver, spleen, pancreas, kidneys, &c. It is lined within by a membrane called the *peritoneum*, defended on either side by the short ribs, and covered with the abdominal muscles, which,

tions to the surrounding parts. The abdomen is bounded above by the midriff or diaphragm, or, to speak more clearly and scientifically, by the *cartilago ensiformis*; and below by the pelvic bones, forming the pelvic cavity, with which it communicates; at the front and sides are the before mentioned abdominal muscles, which also extend backward to the vertebral column, or spine. This is the largest cavity of the human body, and, for convenience of description, it has been mapped out into three zones, upper, middle, and lower, and several parts, or regions. (See *diagram*.) That in the centre at the top is called the *epigastric* region (1); those on either side of it are the *hypochondriac* (4 5); next in the centre is the *umbilical* (2); right and left of which are the *iliac* (6, 7); below these are the *inguinal* (8, 9); and between them the *hypogastric* (3); forming the lower central division.

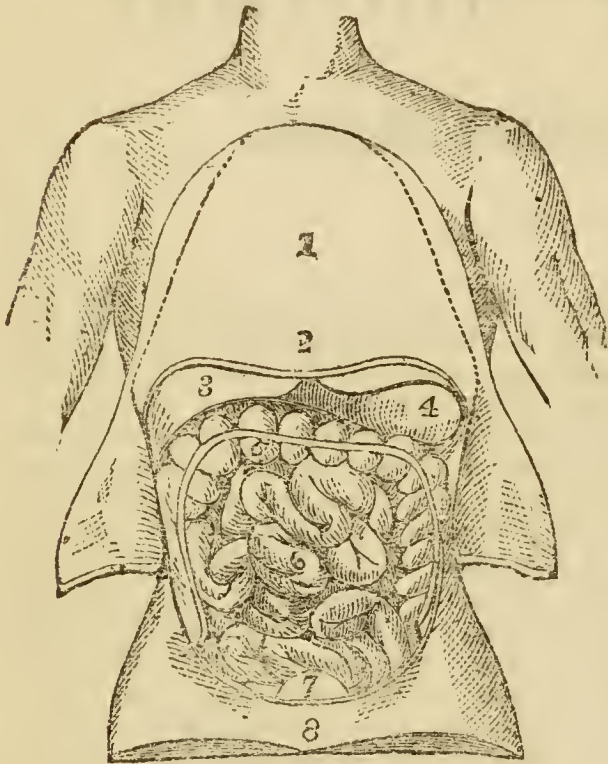
Some anatomists include in the abdominal regions the *inferior dorsal* and *lumbar*, which are at the back, corresponding in position with the two upper zones.

Contents of the Abdomen,—or, as they would be more properly called, the *abdominal viscera*, this word being the plural of *viscus*, which means a bowel or any internal organ which has a specific use—are thus situated. (See *diagram*). Below the chest (1), and next to the diaphragm (2), is the liver (3), extending from beneath the right ribs across to the left, and having the largest development on the former side. Next to this is the stomach (4), the smaller end of which is situated in the epigastric, and the larger in the left hypochondriac region, where it comes in contact with the spleen, or melt. Behind the stomach lies the pancreas, or sweetbread. In the middle zone lies the large bowel (5), the omentum or caul, with a portion of the small intestines (6); and behind these, close to the spine, are the kidneys. The small intestines also pass down the centre part of the inferior



by their relaxations and contractions, in the act of breathing, assist digestion, and give the necessary secretive and expulsive mo-

gone, as do laterally the ends of the large intestines, or colon; and there also we find, when it is distended, the upper portion of the bladder. (7). Over all these viscera,



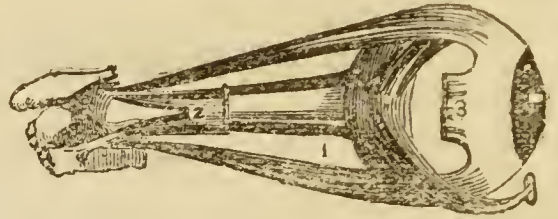
covering and supporting them, extends the moist glistening membrane called the *peritoneum*, which extends also into what is called, in the male, the *rectum*, in the female the *vomb*. Some of the abdominal viscera are solid, as the liver; some hollow, as the intestines: and the sounds which they emit, when the abdomen is struck by the finger of the skilful physician, indicate to his trained ear, the state and condition of the organs within.

The situation of these viscera varies considerably with the changes in the position of the body, and a blow, a violent strain, or a sudden jerk, may cause a serious derangement of them; one of the most common accidents to which they are liable is what is called *hernia*, or *rupture*, of which we shall speak more fully under its proper head, as we shall of the liver and other organs, with the diseases to which they are liable, when we have to treat of them more especially.

ABDOMINOSCOPY (from the Latin *abdomen*, and the Greek *skopein* to view), means the examination of the abdomen with the view to detect disease. It is generally performed while the patient lies on the back, so as to leave the muscles relaxed. The hand of the examiner is passed carefully over the abdominal region, so that it may detect any abnormal or unnatural condition of the viscera, or parts adjacent.

ABDUCTOR AND ADDUCTOR (from the Latin

ab from, and *ad* to, and *duco* to draw). Muscles, whose office it is to draw one part to or from another. Connected with the eye are a pair of these muscles, by which the motions of the ball are effected; they are sometimes called the *internal* and *external*



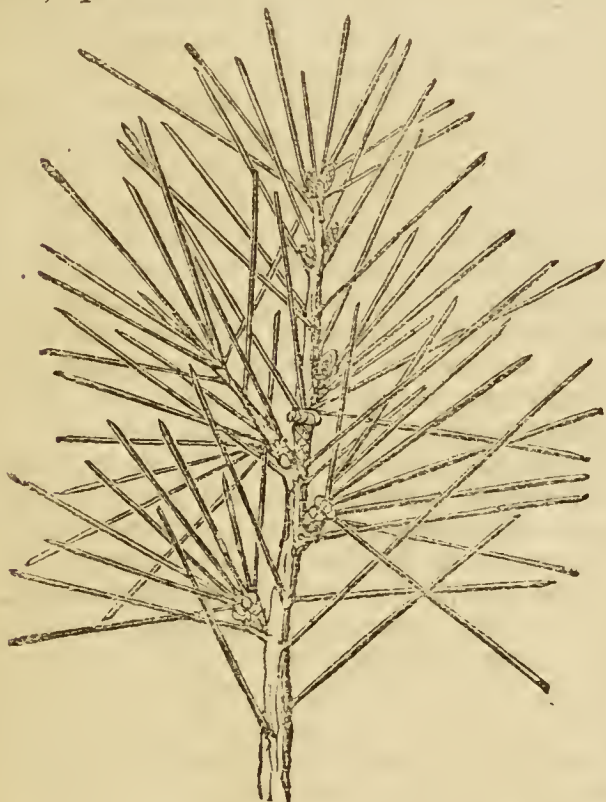
recti. In the accompanying diagram, 2 is the internal rectus, partly concealed by the optic nerve; 1, part of external rectus, showing its two heads of origin; 3, extremity of external rectus at its insertion.

ABELMOSCHUS—*Musk Seeds*. The produce of the *Hibiscus Abelmoschus*, growing in South America, and belonging to the natural order *Malvaceæ*; they have a strong odour of musk, and, like that substance, have stimulant and antispasmodic properties. They are sometimes used as a remedy for the bite of serpents. The only form of administration in this country is the *Tinctura Abelmoschi*, dose half a drachm to a drachm and a half, recommended with alkalines and tonics for indigestion, nervousness, and gout.



ABERRATION (from the Latin *aberro*, to wander,) a wandering or unnatural state of the mind. See *Lunatic Madness*.

ABIES is the botanical name for the Firs, a genus of trees of the coniferous tribe, from several species of which are obtained gums and other substances used medicinally. See *Burgundy Pitch*, *Canada Balsam*, *Frankincense*, *Spruce*.



ABLACTATION (from the Latin *ab*, from, and *lac* milk). See *Suckling*, *Weaning*.

ABLEPSIA, **ABLEPSIS**, or **ABLEPSY** (from the Greek *ab*, and *blepo* to see), a deprivation of sight. See *Blindness*.

ABLUENT (from the Latin *abluo* to wash away). A term formerly applied to medicines used for purifying the blood. See *Detergent*.

ABLUTION (from the Latin *ablutio*, a washing or purifying). No person who has a due regard for health will neglect that which is so essential to its preservation, viz., personal cleanliness. In this country, ablution, or washing of the body, is not nearly so frequent as it ought to be, especially among the operative classes by whom it is most needed. It is necessary to the proper performance of the functions of the internal organs, that a certain amount of waste matter, so to speak, should be thrown off through the pores of the skin; and unless these are kept free from dirt and other impurities, much of this matter must be retained in the system, to be got rid of by some other less natural means, or to remain and lay the foundation of various diseases of a very troublesome and painful character. Among these may be mentioned *gout* and *gravel*. It has been said that "clean-

liness is next to godliness," and certain it is that no one who entertains a proper sense of what is due to himself, his neighbour, and his Maker, will neglect this important duty. Languor, headache, loss of appetite, and general debility, is often the result of such neglect, and neither religious nor secular duties are likely to be well performed when this is the case; few have sufficient strength of mind—call it philosophy or what you will—to struggle with and overcome the feelings of peevishness and discontent, and disinclination to active exertion, which accompany an ill state of health; and it behoves all, in whatsoever station they may be placed, to neglect no means necessary to keep this wonderful anatomy of ours in proper working order.

As to the *times* and *seasons* when ablution may be performed with the greatest advantage, this must depend much upon individual constitution and circumstances. As a general rule, the whole surface of the body should be cleansed at least once a week, with soap and water; good strong yellow soap is the best to use, and rain water, when it can be procured fresh and clean. Washing with simple water should also be resorted to once a day, either at night or morning, followed up in all cases by rubbing with a rough towel or a flesh brush, to restore the animal heat carried off in the process of rapid evaporation. Those in robust health should use cold water throughout the year; delicate persons may have it tepid in winter. When the feet only are washed, the water should always be slightly warm. In some cases ablution of the whole body produces heart-burn and other distressing symptoms; in such, partial washing should be practised, or if this cannot be borne, dry rubbing with a towel or brush. For children and aged persons *regular* and *thorough* washing is especially necessary; in the former cases to strengthen the system, and in the latter to stimulate to healthy action the vital functions. In both these cases it is best to avoid a chill by using tepid water. For further particulars on this head, see *Bathing*, *Washing*, &c.

ABORTION (Latin *ab* from, *ortus* birth). The premature expulsion of the fœtus from the womb, that is before the seventh month; after that period, if delivery occurs before the ninth month, it is called premature labour.

Causes. Abortion, or miscarriage, as it is more commonly termed, may proceed from various causes, such as a sudden shock to the system by a fall or a fright, straining or over-reaching; the administration of

strong purgatives or emetics, excessive indulgence in venery, or aught which may tend to debilitate the system; malformation of the generative organs; fevers and severe inflammations; syphilis or constitutional disease of any kind; the growth of polypi or tumours in the cavity of the uterus, or adhesion to the surrounding viscera; too great contractibility of the uterine fibres, and blood vessels: most frequently, perhaps, it is a diseased condition of the foetus itself, which wanting the elements of growth and vitality, is rejected as a useless and troublesome incumbrance. Two classes of females, very different in constitution and appearance, are more than commonly liable to abortion, viz., those of a voluptuous and plethoric habit, and those of a weak and irritable frame. For obvious reasons it is more common for women of the lower orders to miscarry than those of the middle and upper classes; those who continue to suckle after conception has again taken place, render themselves liable to it, because a certain amount of nutriment required by the foetus, goes to the formation of the actal fluid.

Effects. Miscarriage is generally attended with much pain; it weakens the system, and often severely tries the constitution of the sufferer, whose liability to the accident increases with each occurrence. The periods at which it is most likely to take place, are said to be about a month after conception, again in twelve weeks, and again in the seventh month, the liability increasing in those stages which correspond with the periods of menstruation. Some females invariably miscarry at a certain stage, and thus although often in the way to become parents, are never blessed with offspring.

By this it will be sufficiently plain that pregnant women ought to avoid all violent exercises of the body, strong mental excitement, over indulgence of sensual appetites, exposure to wet, or any extremes of weather, or aught which may tend to constitutional derangement of whatever kind; and those who have once aborted should be doubly careful on account of their greater liability.

Symptoms of miscarriage vary considerably according to the more or less advanced stage of pregnancy, and state and condition of the patient; but usually she feels at first slight pains in the loins, and parts about the womb; there is a sense of bearing down, a frequent desire to make water, or to evacuate the bowels, and a feverish state of the system generally. A discharge of blood commonly follows, sometimes in clots,

at others in gushes, in longer or shorter intervals; and this will continue until the foetus is expelled. As the patient cannot be considered out of danger, until relieved of the ovum, the discharge ought to be carefully watched, and preserved for the examination of the medical man, should he not be present during its progress, which is much to be preferred.

Treatment. The first object, when the premonitory symptoms above mentioned set in, is if possible to *prevent* abortion; to this end the patient should at once assume a recumbent position, and on no account be suffered to move more than may be absolutely necessary; if she is of a plethoric habit, and complains of a sense of fulness, and especially if there be a strong quick pulse, and febrile symptoms, from eight to twelve leeches may be applied to the lower part of the stomach, (Buchan says, "that sanguine and robust women who are liable to miscarry at a certain time of pregnancy, ought always to be bled a few days before that period arrives,") and salines administered, such as the common effervescing draughts of soda and tartaric acid; or if an aperient is required, seidlitz powders with cold clysters to assist the action, if necessary. If there is much heat in the abdomen, cloths wet with vinegar and water in equal proportions should be applied thereto, and removed as often as they get warm. When the hæmorrhage becomes at all profuse, all hopes of prevention are at an end, and the efforts should be directed to relieve pain, prevent utter exhaustion of strength, and finally to remove as quickly as may be, the ovum from the womb; to effect the latter object, mechanical means are sometimes resorted to, but only one thoroughly acquainted with the anatomy of the parts should attempt this. As the flooding proceeds, the patient should be kept as cool as possible; she should be exposed to, and suffered to breathe, cold air; acidulated drinks should be administered; if ice can be obtained let it be used to lower their temperature. Should fainting ensue from loss of blood, cordials may be given, but not hastily, or frequently; a tea spoonful of brandy, or fifteen drops of Aromatic Spirits of Ammonia, in half a wine-glassful of cold water, is the best stimulant for the purpose. When the discharge is very profuse, lint, wadding, or a piece of sponge, dipped in a Solution of Alum, and then in Olive Oil, may be introduced into the vagina, or an injection of the same gently thrown up by means of a syringe; or a decoction of Oak Bark may be used for the same purpose.

Should these means fail to check the hæmorrhage, make up eighteen grains of Sugar of Lead into twelve pills, with crumb of bread, and give one every two hours, with a draught of vinegar and water, or diluted Sulphuric Acid, fifteen drops in half a wine-glass of water being a sufficient dose. Opiates may be given with advantage when the pain is *very* severe, especially before the flooding comes on, or after it has continued too long; *suppositories*, consisting of about a grain of powdered opium, made up into a softish mass, with a few grains of powdered Gum, or Extract of Henbane, are also useful; these latter may be introduced when miscarriage is likely to ensue; with rest and proper care they will sometimes prevent it.

We can say nothing here about abortions voluntarily produced, except to warn females of the folly and danger of resorting to unprincipled empirics, or the use of powerful drugs, to hide the consequences of an unlawful gratification of their passions. Death has frequently resulted from the employment of such means as are necessary to produce abortion, and far better is it to bear the shame and disgrace of being the mother of illegitimate offspring, than incur the risk and sin of being possibly a destroyer of self, as well as of the embryo of a human being, over which the parental instinct alone ought to stimulate to tender care and watchfulness.

ABRASION (from the Latin *abrado* to shave off), a mechanical removal of the outer or scarf-skin, commonly called a *graze*. This, although but a trifling injury is often painful and difficult to heal, especially if it occurs on parts exposed to much friction or contact with hot, or otherwise, irritating fluids. The cuticle soon grows again if the part is kept quiet and protected from injury; collodion and glycerine applied with a camel hair brush are both useful in this case, but as they cause considerable smarting, it is best to cover the part first with a piece of gold-beater's skin. Should the abraded surface be large, lint or linen rag spread over with zine ointment, or saturated with zine or goulard lotion, should be applied. See *Chafing*, *Cuticle*, *Epidermis*, *Excoriation*, *Skin*.

ABSCCESS (from the Latin *abscedo* to depart). A collection of pus, or purulent matter, in a cyst or cavity formed in any of the tissues of the body. *Causes and Consequences*. Inflammatory action of the adhesive kind, induced by a blow or prick, or the introduction of something poisonous or otherwise irritating. The cells of the

membrane become filled with adhesive matter, a mere drop at first, but as ulceration proceeds, this increases in quantity, the surrounding parts are gradually absorbed, the solids converted into a fluid state; more active inflammation is set up, causing acute pain, restlessness, loss of appetite, and, of consequence, great constitutional derangement. Happily, for the chance of eventual cure, the absorption does not proceed with equal rapidity on all sides, but has a tendency towards the surface of the body, and by this we learn that matter has no eroding property—does not act, like an acid or caustic alkali, chemically or mechanically upon the tissues, as at one time supposed.

In the above paragraph we note some of the *immediate* consequences; among those more remote and permanent, may be mentioned a general weakening of the system, and often lasting injury to the parts affected.

Abscesses are of two kinds, *acute* and *chronic*; the former may last from three to six weeks, beginning to discharge usually at the end of the first period; the latter, which is commonly seated in some internal part, such as the liver, may continue for several months, its duration depending very much upon the remedial means resorted to, situation, constitution of the patient, &c.

Symptoms and Treatment. Heat and tenderness of the part affected is the premonitory symptom of an acute abscess; it is commonly confined at first to a small spot, which becomes red, and painful to the touch: very soon a distinct throbbing, may be felt, which is a sure indication of the formation of matter; then the part begins to swell, and the skin exhibits a shiny, semi-transparent appearance, sometimes being tinged with purple; this becomes more marked and decided as the tension increases, with the increase of the matter beneath, until it gives way of itself or is opened by some sharp instrument, and the pus flows out, at first of a cream-like colour and consistence, often turgid and streaked with blood; thus it continues for a week or more, then gradually becomes clearer and thinner, until it is quite watery, or ceases altogether. During this process, before the matter has found a channel of escape, the pain becomes more and more acute, until it is almost unbearable, giving the patient no rest day nor night; then ensues the constitutional derangement spoken of under the head of consequences, and often febrile

symptoms, which must be relieved by means of cooling aperients.

Fomentation with water as hot as it can be borne, and hot bread or linseed poultices, should be resorted to in the first stages of an acute abscess: strong drawing and irritating applications are often made use of, but this only increases the anguish without doing good: indeed it is both cruel and hurtful. The poultices should be frequently changed in order to keep up the requisite degree of warmth; they should be carefully adjusted so as not to press unduly upon the tenderest part, and when the pain is very severe, poppy heads should be boiled in the water with which they are mixed, and this poppy decoction should also be used for the fomentations. If, as is often the case, the abscess should be in the hand or lower part of the arm, that limb should be supported by a sling made of a silk handkerchief, or some other soft material, so as to keep it from hanging down: adjust it so as to have the upper part of the arm as nearly perpendicular as may be, and the bend of the elbow at right angles with it. To keep the system cool and allay the fever which generally more or less attends active inflammation, the patient should take, every other night or so, an aperient pill, composed of Compound Extract of Colocynth, 4 grains; Calomel, 1 grain; and two or three times a-day, a tablespoonful of the following mixture:—Sulphate of Magnesia, $\frac{1}{2}$ an ounce; Carbonate of Magnesia, 1 drachm; Wine of Tartarized Antimony, 2 grains; Camphor Mixture, 6 ounces: should this mixture cause griping in the bowels, add thirty drops of Essence of Peppermint; if it acts too violently, reduce the quantity of Sulphate of Magnesia to one-half, and take a pill every third night only. When the anguish prevents rest at night, this draught may be taken at bed-time—Acetate of Morphine, $\frac{1}{4}$ of a grain; Liquor of Acetate of Ammonia, 1 drachm; Camphor Mixture, 7 drachms.

After the discharge of purulent matter has ceased, the poultices may be discontinued, and moist rags kept applied for some days, after which the edges of the wound may be drawn together by strips of adhesive plaister, over which it is best to place a dressing of Turner's Cerate or Spermaceti Ointment. If the wound is deep and large, it may be some weeks before it fills by granulation, but otherwise the healing process proceeds rapidly, unless there is a want of vital energy in the system, or a diseased state of the part immediately affected; in this case bad sloughing ulcers

result, which are very difficult to heal, for their treatment, see *Ulcers*.

A medical man will generally open an abscess, when it is sufficiently ripe, rather than wait the slower process of the breaking of the skin, and by doing this he often saves the patient much suffering and constitutional derangement; but no person unacquainted with the anatomy of the part should attempt this; to do it effectually the cut should be bold and deep, and exactly in the right place; an unpractised hand will probably leave the largest reservoir of matter untouched, and so render another incision necessary, and effect no good purpose by the pain inflicted. Where the integument which covers the seat of the abscess is hard and thick, it is nearly always necessary to open it, and only the skilled practitioner can judge of the proper time for doing this; therefore his aid should in all such cases be solicited; as in those of deeply seated and internal abscesses, which generally assume a *chronic* character. With regard to the treatment of these no specific directions can be given, it must depend much upon the character of the tissues which they affect; as a general rule, the patient's strength must be supported by a good and generous diet, and the administration of tonic and cordial medicines, taking care to keep the bowels moderately open. Stimulating plaisters made of Burgundy pitch, Gum Ammoniac with Mereury or Galbanum, are applied with advantage to the abdomen, or other seat of the affection, as are poultices of oatmeal with vinegar, or yeast, or water impregnated with salt. For abscesses in the neck, Astley Cooper recommends incision with a sharp knife, pressing the matter well out so as to excite adhesive inflammation, and dressing the wound with bread poultices moistened first with Sulphate of Zinc in solution, and afterwards with Spirits of Wine, giving good light nourishment, and carefully regulating the bowels.

For the relief of the hectic fever, night sweats, and other constitutional disturbances, caused by both acute and chronic abscesses, but more especially the latter, preparations of bark or iron, mineral acids, or cod-liver oil may be given during the period of copious discharge; and especially immediately after it, when the powers of nature are most sorely taxed to supply the waste, and reconstruct the destroyed tissues, is nourishing food and strengthening medicine required.

Internal abscesses have been variously denominated according to their seat, as

empyema, when in the cavity of the pleura; *ronica* when seated in the lungs; *panaris* or *whitlow* when in any of the fingers; *hypossiom* when in the interior chamber of the eye; *arthropyosis* when in a joint; and *psoas* or *lumbar* when in the loins.

Under the head of abscesses might be classed *Boils*, *Small-pox*, (every pustule being a little abscess,) and several other forms of eruptive and other disease, but all these will be spoken of in their proper alphabetical order; we now, therefore, merely refer to them as in some degree connected with our present subject, as are also *Consumption*, *Hectic Fever*, *Pleurisy*, *Poultices*, *Pus*, *Suppuration*, and *Water-dressing*.

ABSCISION (from the Latin *ab* from, *scissio* to cut). Used in surgery to denote the cutting away of some dead or useless part with an edged instrument. Employed by old medical writers to express the sudden termination by death of a person, before disease had begun to decline.

ABSINTHIN, a new resin discovered in Wormwood by the German chemist, Kuns-muller, it is intensely bitter, but its properties as a remedial agent have not as yet been much tested.

ABSINTHIUM (from the Greek *absinthus*, from or by pleasure). See *Artemisia*, *Worm-wood*.

ABSORBENTS (from the Latin *absorbeo* to suck up). There are two distinct sets of minute vessels distributed throughout the frame whose office it is to absorb and convey fluids into the thoracic duct, or to speak more plainly, into the channel of the general circulation. These are called:—

1st. *Lacteals*, which take up the *chyle* or nutritious portion of the food from the alimentary canal; they are delicate transparent tubes, having valves like the veins. After leaving the stomach laden with the milky looking chyle, they unite in one common trunk, and pass up the front of the spine, between the folds of the *mesentery*, where being knotted or twisted together, they are improperly called the *mesenteric glands*. Above this, still increasing in bulk as they proceed, they join the larger veins, communicating directly with the heart.

2nd. *Lymphatics*, which pervade almost every part of the body, from whence they convey a fluid called *lymph*, containing whatever nutrient matter is fit to re-enter into the circulation. These, which in size and appearance closely resemble the lacteals, also assume, at places, a glandular form, doing so principally in the neck, under the armpits, in the groins, and insides of the

thighs, where we have them spoken of as *lymphatic glands*. They are very liable to enlargement and inflammation, and will sometimes suppurate and produce wounds painful and difficult to heal; especially is this the case in weak and scrofulous persons. The cause of suppuration is often a sore with which the lymphatics have come in contact, and when this is the case it is useless to heal the effect while the *cause* remains; this must be first sought out and cured. "Waxen Kernels," "Kernels of the Neck," are names commonly given to these enlarged glands, to reduce which, and prevent suppuration, the system should be strengthened with nourishing food and tonics, regular exercise, sea bathing, and change of air. Preparations of Iron, Iodide of Potassium, with bitter infusions will be found useful, and also Cod-liver Oil, with plenty of Milk, Port-wine, Porter, &c. For local application before suppuration ensues, paint the glands over with strong Tincture of Iodine about every other day; when suppuration has ensued, proceed the same as with an abscess. See *Glands*, *Mesentery*, *Scrofula*, *Tubes*, &c.

ABSORBENT MEDICINES. See *Anti-acids*.

ABSORPTION. This process is performed not only by the vessels above described, but, to a certain extent, by the blood vessels also, and even by the pores of the skin; thus nutriment in a liquid form, has been introduced into the system of one incapable of swallowing; and shipwrecked mariners, who could not obtain fresh water, have, by wrapping round their bodies clothes saturated with salt water, been in some degree relieved of their dreadful thirst. Remedial agents are sometimes administered by friction or rubbing in, or by applying them to an ulcerated surface produced by a blister, this is *cutaneous absorption*, which may be effected by means also of medicated baths. So may deleterious matter be introduced into the system through the pores of the skin; and, as in the old fable, a poisoned shirt be made the instrument of death and vengeance. In the bites of serpents, and other venomous creatures, of mad dogs, &c., the poison passes immediately into the circulation through the veins. See *Poisons*.

ABSTERGENT (from the Latin *abstergeo* to cleanse). Formerly applied to lotions or other applications for cleansing sores; sometimes called *abstersives*. When applied to suppurating surfaces it is more usual to call them *detersives*.

ABSTINENCE (from the Latin *abstinco*, to abstain) means here, excessive privation of

food; it may be either *voluntary* or *involuntary*, in the former case proceeding from a diseased condition of the mind, such as is common in some forms of *mania*; sometimes carried to the extent of death by starvation, but not often, as the natural appetite for food prevails over the determination of the patient to abstain from it; and by the use of the stomach-pump, food can, in most cases, be conveyed down the gullet of the most violent maniac or determined suicide. In the treatment of disease, partial abstinence from food enters, at times, into the plans of all physicians, and forms part of their dietary arrangements, and in this case, it may be called voluntary. Not so, however, is it with shipwrecked mariners and others, placed in situations where food cannot be obtained; or, as is sometimes the case, where contractions of the gullet prevents the passage of nutriment to the alimentary canal. See *Œsophagus, Gullet*.

It is necessary, after extreme abstinence, to be very careful in the administration of food, as the weak state of the stomach renders it incapable of retaining much at once; then, little and often, must be the plan of operation; a few table-spoonfuls of good soup every half-hour or so, or milk thickened with bread, and a little brandy. Sometimes an opiate is required to allay the feeling of sickness, and in this case a few drops of solution of Morphine in Camphor Mixture is good. (See *Starvation*.)

Abstinence is frequently practised on religious grounds, with the view of mortifying the body, and sometimes indeed to a very mischievous extent. A full and regular supply of good nourishing food is necessary to some constitutions, and there is no greater mistake than that often committed by persons of weak digestive powers, who fancy that the less they give the stomach to do the better, and, therefore, half starve themselves; by this means they permanently lower the tone of the whole system, and yet more weaken those very organs which are already too weak. See *Diet, Digestion, Regimen*.

ACACIA (from the Greek *akazo*, to sharpen), a genus of trees or shrubs belonging to the natural order *Leguminosæ*, or Pea-tribe, mostly bearing sharp spines. Those from which we derive the Gum Acacia, or Gum Arabic of commerce are *A. Vera*, (see *cut*) *A. Arabica*, and *A. Senegalensis*; they are natives of the East, being found most plentifully in Egypt, Turkey, and Arabia.

ACACIA GUM, or **GUM ARABIC**, is used medicinally, chiefly in diseases of the lungs and kidneys, or in intestinal or other dis-

orders, which produce irritation of the internal passages, which, on account of its demulcent properties, it soothes and protects. This gum is white or yellowish in colour, transparent, unless full of little cracks, which render it opaque; brittle, and easily soluble in warm water: the Senegal gum is the darkest in colour, and most impure; it is not so much used for medicinal purposes as the Arabian and Turkey gums. The official preparations of which they form the chief ingredient, are,—*Mistura Acacia*, or Mucilage, of which the dose is from 2 to 8 drachms. *Emulsio Acacia*, or Gum Emulsion, and *Syrupus Acacia*, both good in bronchial affections, and may be taken *ad libitum*. There is also a Gum Lozenge, *Pasta or Trochisci Acacia*, which is very pleasant and beneficial in all cases in which it is desirable to administer the gum. *Pulvis* (Powdered) *Acacia*, is a good application for burns and excoriated parts, forming a crust over, and so protecting them from the atmosphere; mixed with powdered resin it is sometimes used with good effect as a *styptic*.



ACANTHA (from the Greek *akantha* a thorn). A term sometimes applied to the *spina dorsi*. See *Backbone, Spine*.

ACANTHABOLUS (from the Greek *akantha* a thorn, and *ballo* to strike). An instrument used for extracting splinters of bone, &c. from wounds, the throat, &c.

ACANTHUS MOLLIS (Greek as above, and Latin *mollis* soft), a plant called the Smooth

Bear's breech; formerly much used as a diuretic.



ACARUS (from the Greek *a* without, *kare* the head,) a minute animal found in the pustules of the itch; this particular kind is called *acarus scabies*.



Other *acari*, such as ticks and lice, are found upon the head and body, sometimes, notwithstanding the greatest care; but, most frequently, they are the result of uncleanly habits. Where there are cutaneous eruptions and sores it is a most difficult matter to get rid of them. The parts should be frequently washed, and a lotion consisting of Sal Volatile, or Spirits of Hartshorn and water, equal parts, applied after each washing. See *Itch*, *Lice*, *Scabies*.

ACATOPSIS (from the Greek *akataposis*, not to swallow). Inability to swallow liquids. See *Hydrophobia*.

ACCELERATION (from the Latin *accelero*, to hasten,) refers, in medical phraseology, to increased rapidity of action—it may be of the *Pulse*, or of *Respiration*, which see; also *Fever*.

ACCELERATOR (from *accelero* to hasten), a muscle which contracts to expel the urine. See *Muscles*.

ACCESSION (from the Latin *accedo*, to approach), is used to signify the near approach, or commencement of the pyrexial, or burning period of fever.

ACCIDENTS (from the Latin *accidens*) are those unforeseen events which are of such frequent occurrence, and by which we sustain bodily injury, more or less severe, resulting oftentimes in death; they cannot be entirely guarded against, else might man ensure a much more certain term of existence than he can with his present liability to them; in many cases they are the predisposing, if not the immediate, causes of disease, and affect the average duration of life in a greater degree than is at all evident to the mere statistical inquirer. But, although we cannot prevent accidents, yet may we, with a little ordinary prudence, lessen the chance of their occurrence, and an observance of the following simple rules may assist us to do so.

1. Be very cautious when on the water, or in its vicinity; more sudden deaths occur by drowning, and more diseases originate from colds caught by immersion and exposure in wet habiliments, than perhaps from all other causes put together; therefore be careful, if in a boat, to remain still, and so as not to destroy the equilibrium of yourself or the boat; be cautious of hoisting a sail in squally weather, and give a wide berth to any advancing vessel. Step not from one unsteady boat to another, or on to a floating pier, nor walk across a narrow plank, without securing good hold on some support. When on land, step not too near the brink of a lake or river; it may be loose and crumbly, or a sudden gust of wind may cause you to lose your balance. When bathing, beware of holes and eddies in the current, especially if you cannot swim; do not venture beyond your depth in the latter case without such support as corks or bladders, and in no case attempt to bathe when in a heated state, or immediately after a full meal. See *Bathing*, *Drowning*, *Asphyxia*.

2. Do not stand beneath a tree in a thunder-storm, or by an iron palisade or spout, whether of iron, zinc, or lead; go not very

near lightning conductors, tall chimneys, or lofty erections of any kind; if in the house, keep away from the fire-place, looking-glasses, and windows, whether open or shut, as well as from doorways through which the electric fluid might escape, if it entered by the chimney: a bed in the middle of the room is the safest place, as blankets and sheets are non-conductors. See *Lightning*.

3. Loaded fire-arms should be put in safe places, out of the reach of children; never play with them, and pretend to fire them at any one. Do not keep guns or pistols loaded at all, unless you have some particular occasion for it. When carrying a gun let the muzzle be always pointed towards the ground, and, if you have occasion to pass it through a hedge or fence, look that there is no one in line with the barrel in the direction in which it points. Do not overload a piece, nor fire it with a foul barrel. Be very careful of gunpowder, and by no means smoke a pipe or segar when you have much about or near you. See *Burns*.

4. Do not sleep near lime-kilns, nor lay by burning charcoal; if drowsiness should come on while in such situations, leave them, and go out into the fresh air. See *Suffocation*.

5. In felling trees keep out of the line in which they are likely to fall, and, before cutting them through, have ropes fixed to the upper part of the trunk, that you may bring them down in the safest direction.

6. In severe weather, if obliged to be exposed to the cold, do not lie down to sleep, although you may feel an inclination to do so. Keep moving about while you have the power, and apply friction to the numbed parts of the body; take up some snow in the hands, and rub them well together. When in a partially frozen condition, you have an opportunity of approaching a fire, do not so too hastily, but get into a higher temperature by degrees. See *Freezing*.

7. Beware of damp beds, and of clothes damp with perspiration, especially of sitting in them in a cold atmosphere, or in a draught of air from an open window. Clothes from the wash should always be well aired, and such as have been long out of wear, especially if kept in a room without a fire. Beware also of new buildings, of which the walls are not sufficiently dry; if they "sweat," as it is technically called, they are unfit for habitation. See *Damp*.

8. Go not into vaults or cellars that have been long closed, or wells, or other confined places, until you have introduced a lighted candle therein; if the flame burns brightly, you may be sure there is no excess of car-

bonic acid gas; if it goes out, or burns dimly, the air is unfit to breathe, throw in some lime-water to neutralize the carbonic acid, and introduce fresh air as soon as possible.

9. Let all horses, draught or saddle, be secured before leaving them, and beware of vicious horses, some of which will bite as well as kick. Be cautious of an animal whose disposition and qualities you do not know. Bulls and boars are uncertain, and dangerous, and strange dogs are not to be trusted; the bite, and even the scratch of a cat has resulted fatally. See *Hydrophobia*.

10. In nurseries and other places where there are children, always keep iron guards before the fires; and even then, do not leave the children by themselves, on account of their well-known propensity to play with fire. For the same reason leave them not alone with lamps or lighted candles, and put lucifer matches out of their reach, and also kettles, or any vessels containing very hot water. See *Burns and Scalds*.

11. Never allow open candles to be carried about the house by servants or children; and if a rush or other light is burned in the night, place it so that the flame could not, were it to fall aside, come in contact with any combustible materials. Turn off singly the taps of all gas-burners, and also, if the light be not wanted through the night, the larger tap at the main. If you smell an escape of gas, do not approach the place where it is likely to be taking place with a lighted candle until plenty of air has been admitted.

12. Put a label with the word POISON on all bottles and packets containing corrosive or other preparations of a hurtful character; and even when so labelled, do not let them be about in the way of children or ignorant persons. If there is occasion to place rat or beetle poison in the house, let it be in out-of-the-way places, and be careful to take it up and destroy it in a short time, should it not be taken by the animals it is designed to destroy. See *Poisons*.

Many other cautions might be given. We might speak of leaving trap and other doors open, and wells uncovered; of leaning too far out of windows; of chopping and sawing wood, and using edged tools of any kind in a careless manner; but it is scarcely necessary to occupy our space by mentioning these, although they all contribute to swell the chapter of accidents which forms part of the history of every life.

ACCIDENTAL COLOURS. This name was given by Buffon to a series of optical phenomena, now called *Occula Spectra*. They

have been classed by Darwin under two heads, *direct* and *reverse*, the former depending upon permanence of impression; the latter being the result of want of power in the retina to retain the impression which is produced by directing the eye steadily for a considerable time upon some dark object upon a white ground, or *vice versa*; on turning away, a well defined impression of the object will be perceived, with the colours reversed. See *Eye, Optics, Sight*.

ACCLIMATION or **ACCLIMATIZATION**, is the act of being inured or naturalized to any particular country or clime, where the air and other atmospheric influences are different from those to which one had been accustomed. See *Air, Climate, Respiration*.

ACCOUCHEMENT—**ACCOUCHEUR** (from the French for confinement, or lying-in). The act of, and the medical attendant at, confinement. See *Child-birth, Delivery, Labour, Travail*.

ACORIA (from the Greek, *a* not, and *korho*, to satisfy). Insatiable hunger produced by disease.

ACETABULUM (from the Latin *acetum*, vinegar,) a vinegar cruet. The cup-like

cavity which receives the head of the *os femoris*, or thigh-bone. See *Bones, Thigh*.

Also a plant, called the sea navel-wort, a species of *tabularia*, of powerful diuretic properties, now but little used; dose, 1 to 2 drachms in wine. See *cut of plant*.

ACETATES (from the Latin *acetum*, vinegar). These are salts formed by a combination of acetic acid with earths, alkalies, and metallic oxides; they are extensively employed in medicine. The following are the principal of those included in our Pharmacopœias:—Acetate of Iron (*Ferri Acetas*) sometimes called Extract of Iron, formerly known as *Extractum Martis*; qualities, tonic and astringent: use in dyspepsia, chlorosis, hysteria, and rhabdomyositis; dose, 4 to 12 grains. 2. Acetate of Mercury (*Hydrargyri Acetas*) or Acetated Quicksilver, antisyphilitic and alterative; used as a lotion in cutaneous eruptions, 2 grains to 2 ounces of rose-water; for internal administration, dose 1 grain in the form of pills. 3. Acetate of Lead (*Plumbi Acetas* or *Superacetas*), commonly called Sugar of Lead; astringent; in weak solutions, cooling and sedative; in strong, 1 to 6 drachms distilled water, stimulant: combined with opium useful in internal bleeding; dose, $\frac{1}{2}$ grain to $1\frac{1}{2}$ grains, with Opium $\frac{1}{2}$ grain, made into a pill with crumb of bread; the lotion good for inflammations, burns, bruises; as an injection in gonorrhœal discharges. 4. Acetate of Potash (*Potassæ Acetas*), formerly called *Kali Acetatum*; mildly cathartic, diuretic, and deobstruent; given in febrile diseases, dropsies, icterus, and visceral obstructions; dose, one scruple to one drachm; if required to open the bowels, 2 to 3 drachms, in solution; sometimes known as Diuretic Salt.

ACETOMETER (from the Latin as above, and the Greek *metron* a measure,) an instrument for estimating the strength of vinegar.

ACETUM (from the Latin *acer* sour), Vinegar. This is of two kinds, common and distilled; the first white, and the latter brown, chiefly used for culinary purposes. *Acidum Aceticum*, and *A. Pyroligneum* (Acetic and Pyroligneous Acid), are the pharmaceutical names of the white vinegar, which is mostly derived from the destructive distillation of wood, hence the term *pyroligneus*, meaning fire and wood. Vinegar is extremely useful for a variety of purposes; it is refrigerant, antiseptic, astringent, and diuretic; and may be given with advantage in inflammatory fevers in doses of 1 to 4 drachms; the Simple Oxymel of the Pharmacopœia is prepared with honey and acetic



acid; dose, from 1 to 3 drachms, in barley-water or linseed tea. See *Oxymel*.

The Distilled Vinegar of the shops (*Aceticum Dilutum*) is but diluted acetic acid; externally, it is used as a discutant, styptic, and disinfectant, being scattered about sick rooms, hospital-wards, and the like. The strong acid is caustic and rubefacient; blotting paper, saturated with it, produces a blister speedily; with aromatics and camphor it has a stimulating and reviving effect, when the vapour is drawn up the nostrils; this is the Aromatic Vinegar (*Aceticum Aromaticum*) with which the sponges of the vinaigrettes are saturated. Camphorated Vinegar (*Acidum Aceticum Camphoratum*) may be used with advantage for this purpose, where there is danger of infection. The French prepare several perfumed vinegars, such as *Vinaigre de Cologne*, and the German dispensatories abound in medicated vinegars, which are chiefly used as preventives against pestilential diseases. Modern English practice has, in a great measure, discarded such preparations; the Vinegar of Meadow Saffron, and of Squills (*Acetum Colchici*, and *A. Scillæ*) are the only two which are much used. See *Colchicum* and *Squills*.

ACETOSELLA (*Sorrel*). The name of a genus of plants belonging to the natural order *Oxalidaceæ*, of which several species grow wild in this country, and are more or less



acidulous. Medical botanists recommend them to be taken freely in febrile disorders,

especially the Wood Sorrel (*Oxalis acetosella*), whose leaves yield the largest quantity of the peculiar acid salt, sold under



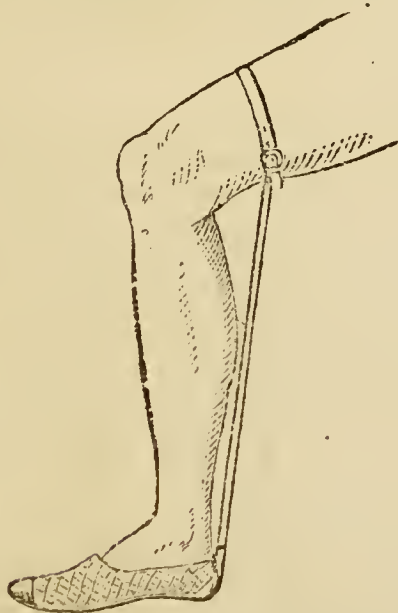
the name of Salt of Sorrel, or Salt of Lemons, and much used for taking ink spots out of linen. *Oxalic Acid*, is also a produce of the sorrels, in which it is found in combination with potash, as it is also in several other vegetable as well as animal substances. This is a virulent poison. See *Acids*, *Poisons*.

The Salt of Lemons of the shops is not pure Salt of Sorrel, being mixed with Tartrate of Potash, commonly called Cream of Tartar, even this is to a certain extent poisonous, death having ensued from taking it in mistake; and chewing the leaves of the plant which contains the *Binoxalate of Potash*, as a chemist would call it, has proved fatal to children, although it has been estimated that the salt forms but 1 part in 500 of the living plant. We give here two cuts, 1, of the pretty little wood sorrel, and 2, of the common meadow sorrel (*Rumex Acetosella*), well known to every juvenile hunter of green meads, where it grows to the height of a foot and a-half, and puts forth halbert-shaped leaves, and a spike of dull red flowers.

ACHILLIS TENDO. *The Tendon Achilles.*

According to the heathen mythology, when Thetis dipped her infant son Achilles, into the river Styx to make him invulnerable, she held him by the heel, and this part being kept from the water was not affected by its wondrous power. Paris, who knew this, when he afterwards fought with Achilles, directed his arrow there, and inflicted a death wound. In allusion to this fable, modern anatomists have given the above name to the great tendon which passes from the muscles of the calf down to the heel, upon which it acts with the whole force of those muscles. It sometimes happens that by a sudden jerk, or violent exertion, the tendon gets torn across, or ruptured, and great pain or lameness is the consequence.

Treatment. On the first occurrence of the accident, if swelling and inflammation ensues, apply three or four leeches, and encourage the bleeding for a time with warm fomentations, or a linseed poultice. Afterwards resort to cooling lotions, such as the following:—Liquor of Acetate of Lead and Tincture of Opium, of each 2 drachms; common Vinegar, 1 ounce; Distilled Water, 15 ounces; keep lint or linen-rag wet with this lotion constantly applied. When the inflammation has subsided, if there be still swelling and stiffness, rub in night, and morning, this liniment,—Strong Liquor of Ammonia and Tincture of Opium, of each, 1 drachm; Spirits of Turpentine and Soap Linament, of each 1 ounce. If it is merely a *strain* of the tendon, a little rest and the above remedial measures will soon afford a cure; but if a positive *rupture*, there may be much difficulty in getting the parts to



unite; to accomplish this end, it is best to use a slipper with a strap attached to the heel, which passing up, and encircling the

thigh may be drawn tight and kept so, as in the accompanying cut. During the process of uniting, if the patient walk at all, it should be with a crutch; and after the cure has been effected, a high-heeled laced boot should be worn to protect the part. See *Strains, Tendons*.

ACHOR (from the Greek *achyron*, chaff). A name given to a small pointed pustule, which generally appears on the head, and contains a pale straw coloured matter, or serum, which on oozing out is succeeded by a thin brown or yellowish scab; for treatment, see *Favus, Herpes, Skin Disease*.

ACID (Latin *acidulus*) may be chemically described as a substance sour and sharp to the taste, that changes vegetable blue colours to red, and, in combination with an alkali, forms a salt. Acids are of two kinds—*vegetable* and *mineral*—both of which are used extensively as medicines. We will speak first of

THE VEGETABLE ACIDS, the principal of which are—

1. **ABIETIC ACID** (*A. Abietis*), an acid discovered in the resin of the *Pinus Abies*, or Spruce Fir; also the peculiar acid liquor, yielded, along with the essential oil, in distillation of the fresh branches or fruit of other species of Firs: formerly much given as a remedy for coughs.

2. **ACERIC ACID** (*A. Acerieum*), found in the juice of the common Maple (*Acer Campestre*) in the state of Acetate of Lime. *Acerates* are salts found in the sap of the same plants.

3. **ACETIC ACID**, or *Vinegar* (already described under the head *Acetum*).

4. **BENZOIC ACID** (*A. Benzoë*, or *Flores Benzoës*), sometimes called Acid, or Flowers of Benjamine. (See *Benzoin*.) The form in which this acid is presented is that of white, shining, needle-like crystals, as light as flakes of snow, with an aromatic odour, and an acid taste: it dissolves readily in spirit of wine, but sparingly in water: it may be entirely evaporated by dry heat, and, if the temperature is raised very high, it will burst into a yellow flame. It is a good stimulant and expectorant, sometimes given in chronic bronchitis, or confirmed disease of the lungs, the *dose* varying from 5 grains to 3 drachms two or three times a-day: it enters into the composition of that old and still favourite cough medicine, Paregoric Elixir, the Compound Tincture of Camphor of the present Pharmacopœia, the Camphorated Tincture of Opium of the older ones. It is also in the Ammoniated Tincture of Opium of the Edinburgh College. See *Tinctures*.

5. CARBONIC ACID (*A. Carbonicum*). This is the gas which, when introduced into the stomach in effervescing draughts, is so invigorating and refreshing, and which, when inhaled in large quantities, as in the case of wells and other confined places, is so prejudicial to life. In the former case it is refrigerent and anti-septic, checking vomiting, and allaying thirst and gastric irritations. Applied to the skin, it acts as a stimulant, and it is useful to promote suppuration in ulcers, and remove the unpleasant foetor which attends a purulent discharge. It has been used as an injection into the rectum for cancerous ulcers and dysentery, and also into the uterus, for a diseased condition of that organ. Carbonic acid is an active ingredient in several official compounds. See *Aerated and Mineral Waters*.

6. CITRIC ACID (*A. Citricum*), which is prepared from lemon juice. It is in white semi-transparent crystals of a rhomboidal shape, soluble in twice their weight of cold, and half their weight of boiling water. This acid is refrigerent, antiphlogistic, and antiseptic in its effects. It is useful in fevers and inflammatory complaints; combined with carbonate of soda, it forms a good effervescing draught; dissolved in water, in the proportion of 1 drachm to a quart, may be employed as a substitute for lemon juice. The usual dose is from 10 grains to a scruple; 15 grains of it neutralizes 20 grains of the Bicarbonate of Soda. See *Tartaric Acid*.

7. GALLIC ACID (*A. Gallicum*), obtained from Galls, and, like them, powerfully astringent; given to stop inward bleedings and other discharges, and used in gargles, lotions, and injections. Dose—from 2 to 10 grains, as a general tonic and peptic. In chylous urine, it has been given in 20 grain doses three times a-day. It is in brownish-white crystals, semi-transparent, weighs light, and dissolves in spirit of wine or hot water; makes a good lotion for *Hæmorrhoids* or *Piles*, which see.

8. HYDROCYANIC or PRUSSIC ACID (*A. Hydrocyanicum*), a transparent colourless fluid, with a strong odour of bitter almonds: effects—sedative and anti-spasmodic, very useful in allaying mucus irritation, and so staying sickness; it lowers the action of the heart, and, if given in large doses, speedily causes death. It is useful in coughs of all kinds, especially those which occur in paroxysms like whooping-cough, but should be very carefully administered. The dose for an adult of what is called Scheele's acid, from the inventor, is one drop given in infusion of gentian, or almond emulsion. Of the diluted acid of the "London Pharmacopœia"

three drops may be given, this being the proportionate difference of strength. If desirous of obtaining its full sedative effect, give it in plain water or camphor mixture. In the strength of one drachm of acid to eight ounces of water, it is a good lotion to allay itching in skin diseases. For symptoms of poisoning by prussic acid, and remedies to be resorted to, see *Poisons*.

9. LACTIC ACID, OR ACID OF MILK, (*A. Lacticum*). This is a preparation but very rarely used; it is said to increase the appetite and promote digestion, and has been recommended in *diabetes* (which see): dose from 2 to 10 grains several times a day. There is a medicated lozenge prepared with this acid (*Trochisci Acidi Lactici*) of which 10 may be taken in the day.

10. OXALIC ACID, OR ACID OF SUGAR (*A. Oxalicum*). This is in white shining crystals, not unlike Epsom salts; it is one of the most rapid and fatal poisons; is much used for various purposes of utility, but seldom given internally in this country, although on the Continent it is held in considerable repute as a refrigerent in some inflammatory conditions of mucus membranes; the dose is from $\frac{1}{2}$ a grain to 1 grain. See *Salt of Sorrel*, and *Superoxalate of Potash*, *Poisons*.

11. PHOSPHORIC ACID, OR ACID OF PHOSPHORUS, (*A. Phosphoricum*). This is a refrigerent, and general tonic, not often used, although thought to be superior as such to the mineral acids. It is efficacious in quenching the thirst which generally attends diabetes, and may be employed with advantage where there are earthy deposits in the urine, *caries*, *ossification of the arteries*, or *exostosis*, (all of which see.) The dose of the diluted acid is from 20 to 40 minims.

12. SALICULOUS ACID (*A. Saliculosum*). This is quite a modern preparation, and has not yet come much into use; it is diuretic, irritant, and narcotic, and is chiefly efficacious in dropsical affections, especially those connected with heart-disease, where from the weakened state of the organs it would be dangerous to administer digitalis. It is usually given in the form of tincture, made by adding 1 drachm of acid to 1 ounce of proof spirit; or of syrup, made by adding 45 drops of tincture to 1 ounce of simple syrup. See *Salicine*.

13. TANNIC ACID, OR TANNIN, (*A. Tannicum*). This, like the Gallic acid, which it greatly resembles in appearance, is prepared from oak galls; it possesses the same properties, but is thought to be the most powerful astringent of the two, and is therefore

preferred for local application, such as gargles, lotions, and injections. See *Hæmorrhages*, *Piles*, *Ringworm*, &c.

14. TARTARIC ACID, (*A. Tartaricum*). Similar in its properties to Citric Acid; but thought to be more irritant; being the cheaper preparation, it is most commonly used in the composition of Seidlitz and other effervescing powders, and acid drinks.

MINERAL ACIDS. ARSENIOUS ACID, (*Acidum Arseniosum*). This is the common or white oxide of arsenic, purified by exposure to great heat, or, as it would be called, by sublimation. It is given in intermittent fevers, and other periodic diseases, but chiefly in obstinate diseases of the skin; the dose is from 1-16th to 1-8th of a grain, and, like all preparations of arsenic, its effects should be watched carefully; the most common form of administration is what is called Fowler's Solution (*Liquor Potassæ Arsenitis*) where it is in combination with potash; this is given in doses varying from 3 to 15 minims. See *Arsenic*.

2. HYDROCHLORIC, OR MURIATIC ACID. (*Acidum Hydrochloricum*). This is prepared from chloride of sodium, or common salt, in combination with sulphuric acid. It has tonic, antiseptic, and diuretic properties. It is given in bitter infusions, to strengthen and restore the tone of a debilitated stomach; also in typhus fever, and for cutaneous eruptions, and is used in gargles for inflammatory and putrid sore throats, and in injections for *gonorrhœa*, (which see.) The dose is from 10 to 20 drops, properly diluted; for a gargle it should be from $\frac{1}{2}$ a drachm to 2 drachms in 6 fluid ounces of water; for an injection 8 drops to 4 ounces. It is sometimes given as a vermifuge (see *Worms*), and used as a refrigerent and astringent lotion. The *Diluted Hydrochloric Acid* of the Pharmacopœia is that most usually prescribed. The proportion is 4 parts of strong acid to 12 of water, that is 1 in 4. It is a pale straw-coloured liquid, much heavier than water, giving out a suffocating fume, and extremely caustic. It will speedily remove ink stains from linen, which it will destroy if not washed out almost soon after it is applied.

3. NITRIC ACID (*A. Nitricum*). Prepared from nitrate of potash, or saltpetre and sulphuric acid. A heavy colourless fluid, has tonic, antiseptic, and antisiphilitic properties; it is given in chronic disease of the liver and indigestion, especially when connected with urinary deposit of uric acid, and the phosphates. On sero-

fulous habits, and constitutions worn out by indulgence in excesses, it sometimes has a good effect; it has also been found useful in *hooping-cough* and *asthma* (which see). It is usually prescribed in the diluted form of 1 part to 9 parts of water, the dose of which is from 10 to 20 drops. Largely diluted, it is given as a drink in fevers of the typhoid kind, in dyspepsia, and cases where there is a redundancy of bile.

4. NITRO-MURIATIC ACID (*A. Nitrohydrochloric*) is composed of one part nitric to two parts muriatic acid. Is thought to act more decidedly upon the liver than the preceding, and especially as applied to the skin in a diluted form by footbath and spunging. This too is serviceable in syphilitic and cutaneous diseases.

5. NITROS ACID, OR AQUA-FORTIS (*A. Nitrosum*), consists of nitric acid and nitric oxide in combination—colour, deep brown; fumes suffocating, and volatile; not much used for medicinal purposes; much the same as the three last-mentioned acids in its effects, and, like them, to a certain extent, a disinfectant; preferred by some to either of them in cases of *Cholera*, which see.

6. SULPHURIC ACID, OR OIL OF VITRIOL (*A. Sulphuricum*). Prepared from sulphur. This is the most ponderous of all the fluids, except quicksilver, being more than double the weight of water; when pure it is perfectly clear and white, but so great is its dissolving power, that the slightest portion of vegetable or animal matter which it may take up, speedily deepens the colour, and eventually turns it nearly black. This is the strongest and most corrosive of acids, and one of the most powerful of mineral poisons; and yet, largely diluted, it is very commonly administered as an antiseptic and refrigerent in typhoid fevers; as a tonic in general debility; and as an astringent in hæmorrhages and excessive perspiration. In chronic cutaneous affections, where there is troublesome itching, it is also given with good effect; and latterly it has been much used, and with remarkable success, in the epidemic diarrhœa often premonitory of cholera, which has, from time to time prevailed in this and other countries. The *diluted Sulphuric Acid* of the Pharmacopœia (*A. Sulphuricum Dilutum*), which is usually prescribed, contains $1\frac{1}{2}$ in 20 parts, and the dose of this is from 10 to 30 minims largely diluted. For a gargle to check salivation, 1 to 3 drachms may be put into half a pint of any convenient fluid; this may be used in all cases where an astringent application is required.

7. AROMATIC SULPHURIC ACID, OR ELIXIR

OF VITRIOL, is composed of spirits of wine, sulphuric acid, and spices. It is an elegant and useful preparation, which was formerly much more administered than it is at present. This is stimulant and tonic, and is good in dyspepsia, the debility following fevers, combined with bitter infusions, and also in chronic asthma. The strong sulphuric acid may be applied to the skin as a caustic, either alone or formed into a paste with saffron, in which form it is *Causticum Sulphureum*; it may be used as a stimulating ointment mixed with lard, as in the *Unguenti Acidi Sulphurici*; or with oils, as in the *Liniment Ac. Sulph. Compositum*; largely diluted with water it is a good lotion for skin diseases and astringent injections.

ACID BATHS. See *Baths*.

ACIDIFIABLE. A term applied to substances capable of being converted into an acid by an *acidifying principle*, as that is called which possesses this power of conversion; such it was once thought was oxygen, but it is now well known that when two or more bodies combine to form an acid, they all enter into the composition thereof.

ACIDIFICATION. The conversion of a body into an acid.

ACIDITY. The peculiar quality of acids.

ACIDIMETRY. The measurement of the strength of acids are all terms springing from the same root and used in chemistry.

ACINI (plural of *Acinus*, a grape-stone). In anatomy the small granulations composing the substance of the liver and some other glands. These *acini* which are sometimes called *glandular vesicles*, appear to be the terminations of the smaller branches of the excretory ducts or passages; they are oval in shape, about 1-400th of an inch in diameter, and somewhat less than 1-2000th of an inch in breadth.

ACINIFORM (from the Latin, *acinus*, a raisin stone, and *forma*, likeness). An anatomical term, sometimes applied to certain membranes, from their supposed resemblance to raisin stones. See *Choroide*.

ACINESIA (from the Greek, *a* not, and *kineo*, to move). Deprivation of the power of motion.

ACRON (from the Greek *akron*, without colour), a colourless state of the skin, arising from a want of the usual pigmentary, or colouring matter of the membrane situated beneath the cuticle. See *Rete Muscorum*, *Skin*.

ACNE (from the Greek *akne* the top, hence also the word *acme* the height), a

full fruition of anything, applied to a form of eruptive disease, having its origin in what are called the *sebaceous follicles*, that is, small cavities situated in the skin, which supply the cuticle with an oily matter, which is called the *sebaceous fluid*. The tumours which arise from this disease occur chiefly in the face; they contain a thick cheesy matter which it is difficult to get rid of, on account of its consistency, and the small opening afforded for its egress.

Acne has four distinct forms of development:—1st. Simple Pimple (*A. Simplex*), which is its mildest form, and is almost confined to persons between the ages of fifteen and thirty, at which period of life, it is, in this country, very prevalent. It may be considered as a form of inflammation set up by nature to rid the system of the superfluous matter accumulated in the follicles; first appear red spots on the skin, accompanied by itching and irritation, these gradually swell into unsightly pustules, which in a short time discharge their contents; the inflammation then subsides, and the skin resumes its usual appearance. If proper attention is not paid to these pimples, and dirt is suffered to get into them, the disease assumes its 2nd form (*A. Punctata*). Spotted or Maggot Pimples, on account of the little black specks, like the heads of maggots, which present themselves. When several of the follicles become inflamed together, and a hardening of their bases ensues, we have, 3rdly, (*A. Indurata*), Stone Pock, as it is commonly called; and if the pimples become very red, or coppery, then it is called, 4thly (*A. Rosacea*), Rosy-drop, Carbuncle-face, Brandy-face, Copper-nose.

Treatment. The great object is to obtain a free discharge of the offending matter, and to remove the cause by exciting the tissues of the skin to a healthy action; hence frequent washing is desirable, and friction applied gently, so as not to break the pustules, and cause them to run one into another, producing wounds difficult to heal. A sponge and warm water, in which has been dissolved a small quantity of Bicarbonate of Soda, and afterwards a soft thick towel, are the best cleansing adjuncts; and for a lotion to cool the inflamed parts and allay irritation, take Goulard's Extract, or Liquor of Acetate of Lead, 1 drachm, added to 8 ounces of Elder-flower, or Rose-water; or else, to the same quantity of the latter, add Glycerine, $\frac{1}{2}$ an ounce; Chloride of Zinc, 12 grains. Dip a piece of lint into either of these lotions, and moisten the pustules therewith frequently. When

the disease is obstinate, and especially if it assumes the red appearance, it is well to apply Collodion with a camel-hair brush to the eruptions occasionally, and to use a stronger form of the last of the above lotions, with a dressing at night of stimulating ointment, composed of Ointment of Zinc, and of Nitrate of Mercury, in the proportion of 1 drachm of the former to 1 ounce of the latter, with 4 drops of Creosote added. Care should be taken to keep up a proper action of the liver and kidneys, that the skin may have only its own work to do in removing the impurities of the blood. The system should be strengthened by tonics, and a generous but not over full diet; it is best to avoid fermented liquors. The following is a good mixture:—Spirit of Nitric Ether, 2 drachms; Liquor of Potash and Ipecacuanha Wine, of each 1 drachm; Syrup of Rhubarb, $\frac{1}{2}$ an ounce; Infusion of Gentian, 7 ounces: take 2 tablespoonfuls two or three times a-day, and one of the following pills every second or third night:—Compound Rhubarb Pill, 2 scruples; Mercurial or Blue Pill, 12 grains; make into 12 pills. See *Eruptions, Pimples, Skin*.

ACONITE (from the Greek *akoniton*). A poisonous plant, called Wolf's-bane, or Monk's-hood, the latter term being derived from the form of the blossom, which is shaped like a hood or cowl.

There are several species of Aconites, all highly poisonous; the roots of some which grow on the lofty pastures of the Swiss mountains, were formerly powdered and mixed with food to form a bait for wolves, hence the first of the above names. That which produces the most virulent poison is the *Aconitum Ferox*, which is a native of India. Of the kinds grown in our gardens—including the Yellow Monkshood (*A. Anthora*), and the Hairy Wolf's-bane (*A. Barbatum*)—the Purple Monkshood (*A. Napellus*) called by the old English writers the Purple Helmet-flower, is the most common. Its tall spike of dingy purplish blossoms is very conspicuous during the summer months, but children and persons in delicate health should beware of approaching it too near, as even inhaling the scent has been known to produce sickness and fainting. Many lamentable accidents have occurred through mistaking the roots of the Aconite for horse-radish, and this should be a sufficient reason for excluding the former plant from the kitchen garden, at all events. (See *cut.*)

The Aconite belongs to the natural order *Ranunculaceæ*; it is therefore nearly allied to the buttercups of our fields, and the *renunculus* of our gardens; the leaves and

roots are the parts of the plant employed in medicine. In proper doses they are anodyne, sedative, diuretic, and diaphoretic; they are



administered in dropsy, consumption, hypertrophy, or excessive growth of the heart, &c. Outwardly they are used to relieve neuralgic and rheumatic pains, the best form of application being a liniment as follows:—Extract of Aconite, 1 scruple; Soap Liniment, and Compound Camphor Liniment, of each 1 ounce; rubbed into the part affected night and morning. It is sometimes used in the form of ointment, of which there are two formulas in the Pharmacopœia, the simple and the ammoniated, the latter being the preferable. The dose of Extract of Aconite is from $\frac{1}{4}$ grain up to 2 grains; that prepared according to the Edinburgh Pharmacopœia is considered the strongest; of the Tincture of Aconite there are three strengths—London, dose 7 to 10 minims; Dublin, 5 to 8 minims; and that called Dr. Flemmings, 3 to 5 minims. In prescriptions it should be specified which of these is meant. There is also the active principle of Aconite called *Aconitine*, which is far too

powerful for internal use; it is sometimes ordered for ointment; the price of it is extremely high; 5 grains mixed with 1 ounce of lard makes a very strong ointment.

Aconite, Poisoning by.—*Symptoms.* A burning sensation in the throat, pain in the abdomen, vomiting, and diarrhœa, succeeded by giddiness and delirium, which end in coma and convulsions, if enough has been taken to cause death.

Treatment. Vomiting to be produced by mustard, salt, a feather down the throat, or the readiest means, and encouraged by copious draughts of thin gruel or warm water, adding a little spirit, or wine, if the depression be extreme; in which case also apply hot mustard and water to the extremities, and place large mustard plasters down the spine to rouse the nervous system. Promote the evacuation of the bowels by repeated doses of castor oil, given in hot brandy and water, should they not act very freely without, and administer 15 drops of spirits of Sal Volatile in Camphor mixture, about every hour, when the poison is ejected, and the patient appears to be recovering. See *Poisons*.

ACRATIA (from the Greek, *a* not, and *kratos*, strength). Weakness, intemperance.

ACROMION (from the Greek *akron* extreme, and *oomos* the shoulder). The humeral, or upper extremity of the scapula, or shoulder blade; hence the term *aeromial* applies to the arteries, veins, nerves, &c., of this part. See *Shoulder*.

ACROS (Greek *akros*, top), from whence we have several medical terms, now or formerly used, as—1, *acro-bystia*, the extremity of the perpuce; 2, *aero-chier*, the forearm and hand; 3, *acro-chordon*, an excrescence on the skin, with a slender base; 4, *acro-pathia*, a disease at any extremity of the body; 5, *acro-posthea*, synonymous with the first; 6, *acro-thymion*, a conical, rugated bleeding wart; 7, *aer-olenion*, the upper extremity of the ulna; 8, *aer-omion*, the humeral extremity of the scapula; 9, *acromphalion*, the extremity of the umbilicus or navel.

ACROTISMUS (from the Greek *a*, not, and *krotos*, pulse). Defect of pulse. See *Asphyxia*, *Crotophus*.

ACTIOLOGY (from the Greek *aitia* a cause, and *logos* a treatise). The doctrine of the causes of disease.

ACTION (from the Latin *ago* to act). Means the motions and changes observable in the animal body: these may be either *voluntary*, produced by the contraction and expansion of the muscles, in accordance

with the will; or *involuntary* or *excited*, as those of the larynx, pharynx, &c., which receive their impulse through the spinal marrow and nerves; and those depending upon irritability, the former being termed *mediate* and the latter *immediate* actions. Then there are the mixed or *respiratory*, as well as the *secretary*, *nutrient*, and *absorbent* actions of the body, which are all independent of the will.

Medicinal Action is that of the various remedies taken for sickness, or disease, and its nature depends, of course, upon that of the remedies prescribed, and in some degree also upon the state of the system at the time of administration. People are often surprised that a dose of medicine which will operate powerfully at one time, will at another have little or no effect; sometimes this may be the fault of the medicine itself, the drug or preparation may have become spoiled and lost its virtues; but very frequently it is owing to some change in the state and condition of the stomach or other part, on which it is intended especially to act. See *Aperients*, *Cathartics*, &c.

ACTŒA RACEMOSA. Black Snakeroot, an American plant, recommended for its expectorant, diaphoretic, and antispasmodic qualities.

ACUPUNCTURE (from the Latin *acus*, a needle, and *pungo*, to prick). This is a curative process, sometimes resorted to in cases of dropsy, neuralgia, and chronic rheumatism. The method of operation is this:—The skin is pierced with a needle about ten inches long, fitted into a handle. A quick rotatory motion is then imparted to the instrument, which is kept up for a short time, and then another insertion is made. The practice was first observed to obtain among the Chinese, and other nations of the East, who seem to have entertained the notion that several diseases, attended by severe pain, arose from air or vapour pent up in the body, which this process was intended to liberate. European travellers who witnessed beneficial results from the practice, introduced it into this and other countries, and it was, for a time, quite a fashionable remedy for painful local affections; but it did not remain so long, and is now seldom resorted to. In that species of dropsy termed *Anasarca*, in which the water is accumulated in the cellular membrane, immediately beneath the skin, it may be used with advantage, and also as a counter-irritant, in cases where it is desirable to excite inflammatory action in the outer tissues of the skin.

ACUTE (from the Latin *acutus*, sharp).

By this term, physicians distinguish the earlier and more rapid stages of a disease, which next advances into the *sub-acute*, and, if not arrested in its course, finally settles into the *chronic*, or more or less permanent state.

ADANSONIA (*Baobab Tree*). This is one of the most gigantic forms of tropical vegetation, the trunk sometimes measuring 80 feet in circumference. Its scientific name is *Adansonia Digitata*, and it belongs to the natural order *Bombaceæ*. In Africa, where it is chiefly found, it is called by the natives *Lulo*. It has tonic and diaphoretic properties, and has been recommended as a substitute for *Cinchona*, from which it differs in having but little taste. It is best administered in the form of decoction, prepared as under. The preparation is very mucilaginous, and soon spoils; therefore, more than sufficient for two or three days should not be made at once:—Baobab bark, bruised, 10 drachms; water, 20 ounces. Boil ten minutes in a covered vessel, and strain: dose—1 to 4 ounces three times a-day. It may also be taken in powder, but this, on account of the large quantity required, is inconvenient. The cut represents the flower and fruit of the tree.



ADDITAMENTUM (from the Latin *addo*, to add). A term applied to the sutures, which connect certain parts of the skull, called the parietal and occipital bones, with the mastoid portion of the temporal. See *Skull*.

ADEMONIA (from the Greek *ademoneo*, to be in despair). An old medical term, denoting restlessness, anxiety.

ADEN (Greek, *aden* a gland). Hence we have *Adenography*, a treatise on the glands; *Adenology*, the doctrine of the glands; and *Adenoid*, resembling a gland: all medical terms occasionally used. See *Glands*.

ADEPHAGEA (from the Greek *aden*, abundantly, and *phago*, to eat). Voracious appetite. See *Bulimia*.

ADEPS (Latin for animal oil or fat), commonly applied to hog's lard, which forms the basis of most of the ointments in the Pharmacopœia, and is an article of great utility in the arts and sciences, as well in domestic economy and for medical purposes. If good, it is perfectly white, and free from taste or smell, except that which is peculiar to the purest animal fat. The *Adeps Suillus*, or hog's lard of commerce, is often much adulterated, and, having salt in it, is scarcely fit for medical purposes; to render it so, it should be melted down with twice its weight of boiling water, stirred for a while, and then set aside to cool; the water will take up the salt and other impurities, and can be poured off when the fat has become cold. This is the prepared lard (*Adeps præparata*) of the Pharmacopœia, and is, or should be, always used for medical preparations. *Adeps Anserinus*, and *A. Ovilli*, or *Sevum* goose-grease, and mutton or deer suet—are also used medically, chiefly for chaps on the hands and other parts, roughness of the skin, and broken chilblains. They are cooling and emollient, and therefore well-calculated to allay the smarting and irritation of cracked lips, and the like; either of them melted down with about an equal quantity of rose or elder flower water, and stirred until cold, make an agreeable pomade or cream, more serviceable and pleasant to use than the fat alone. See *Chaps*, *Chilblains*, *Cold Cream*, *Pomade*.

ADHESION (from the Latin *adhæreo*, to stick to). This term in surgery signifies the growing together of parts which have been separated by natural or artificial means; it is promoted by the exudation of a lymph, or sticky fluid, for the production of which a certain amount of inflammation is necessary, hence the edges of wounds which exhibit a disposition to become hard, and remain apart, are sometimes scraped, or pared, to produce a raw surface, and inflammatory action; then, if brought closely together, they will commonly adhere, and the wound will heal; if this be the case, and there is no ulceration, nor formation of matter, to obstruct the curative process, it is called a healing, or uniting, "by the first intention." This tendency to adhesion of inflamed surfaces, sometimes gives the surgeon much trouble, as in the cases of inflammation of the chest and abdomen, and of burns and scalds on the hands and feet, where, if great care be not taken, the toes and fingers may become permanently

united. See *Burns, Inflammation, Lymph, Scalds, Wounds*.

ADHESIVE PLAISTER (*Emplastrum Adhesivum*). Plaisters which are simply adhesive, such as the common Diachylon and Isinglass plaisters, are those which are most generally applied to wounds, cuts, and abraded surfaces, to protect them in the one case, and close them in the other. The former under the name of White Sticking plaster or Strapping is in constant request, and since it has been spread by machinery is a very beautiful preparation, smooth as glass, with a perfectly uniform surface, and without cracks, specks, or impurities of any kind; such it is if properly prepared; that most generally used is spread on calico, but that on linen is preferable. The Black Isinglass, or, as it is often called, Court Plaister, is a more elegant preparation, adapted for covering cuts or spots on the face, or other exposed parts; the better sort is spread on silk; the more common on black calico. All these plaisters are to a certain extent healing. See *Cuts, Dressing, Plaisters, Wounds*.

ADIANTUM (*Maiden Hair*). There is but one species of the Maiden Hair Ferns indigenous to Britain; it is called by botanists *Adiantum capillus veneris*, and is used medicinally in coughs and catarrhal



disorders. It is a small evergreen species, with black stems little thicker than pack-thread, which have something the appearance of hair, hence the common name of

the plant. The American Maiden Hair (*A. pedatum*), has the same pectoral qualities, and is much used in France for making the *Sirop de Capillaire*. Country people boil up the leaves of several of our native ferns to make demulcent drinks, and find them useful; but, with the exception of one species, to be hereafter described, they do not merit a place in our modern Pharmacopœias. See *Male Fern*.

ADIAPNEUSTIA (from the Greek *a* not, *dia* through, and *pneu* to breathe). Defective or impeded perspiration, nearly synonymous with *Adiaphoresis*.

ADIPOCIRE. A substance obtained from the soapy matter into which muscular fibre is converted when buried in large masses, or exposed to the constant action of water. It is highly inflammable, dry, oily, waxy, capable of crystallization, and quite insoluble in water.

ADIPOSE MEMBRANE, OR TISSUE. This it is which encloses the *adeps* or animal fat; it is described by Wilson as composed of minute cells aggregated together in clusters of various sizes within the *areolæ*, or void spaces of common cellular tissue. The cells of adipose tissue are identical in manner of formation with other cells, being developed around nuclei, or centres, and increased in size by the formation of fluid in the interior. In adipose cells this fluid instead of being albuminous (see *albumen*) as in other cells, is oleaginous (oily); the oil at first appearing in separate globules, which subsequently coalesce into a single drop. The size of adipose cells at their full development is about 1-500th of an inch in diameter; when isolated they are globular in form, but are hexagonal or polyhedral (six sided, or many sided), when compressed. They are perfectly transparent, the cell membrane being structureless, and the nucleus disappearing as they attain their full size. Such is the cellular tissue, according to the increase or diminution of which, we are stout or slim, obese or attenuated. See *Fatness, Obesity, Tissues*.

ADIPSA (from the Greek *a* not, and *dipsa* thirst). Applied to medicines which quench thirst. In old medical works we sometimes find oxymel so called.

ADJUVANS (from the Latin *adjuvo*, to help), applied to that part of a medical formula which assists and promotes the operation. See *Prescription*.

ADNATA TUNICA (from the Latin *adnascor*, to grow to, and *tunica*, a tunic, or coat). The external coat of the eye. See *Conjunctiva*.

ADOLESCENCE (from the Latin *adoleseo*, to grow). The period of life at which the body has attained its full development, commencing at puberty and terminating in the male at twenty-five and in the female at twenty-one. See *Age*.

ADULT (from the Latin *adoleſco*, to grow). This term is generally applied to those grown up; past the age of infancy and weakness. See *Age*.

ADULTERATION (from the Latin *adultero*, to pollute) **OF FOOD**. This is a subject into which we cannot enter at great length, although it is one which is intimately connected with the physiology of health and disease. No one doubts that adulteration is largely practised, that almost every article we eat is other than it professes to be. The ablest chemists of the day have been recently directing their attention to this important subject, and have made revelations that have startled the eating and drinking public. The result of their investigations with regard to some of the commonest necessities of life may be briefly stated.

Bread. In the composition of this great staple of existence, the flour of other cereals, such as barley, rye, maize, is frequently mixed with that of wheat; this is especially the case with brown bread; in the white, not so manageable on account of its colour, ground rice is oftener employed; and as it absorbs much water, which the heat of an ordinary oven does not evaporate, the bulk and weight of the dough is increased by this process, to the detriment of its nutritive powers. Meal of peas or beans is the common article of adulteration in the second class bread, which, it has been contended, is rendered better by such adulteration; but, no plea should suffice to give the manufacturer the power to furnish the consumer with other than that which he professes to sell. If people choose to eat bread made of pea or bean meal, let them do so; but let it be sold as such. Potatoes are undoubtedly much used by bakers, but it appears to be more as a ferment, than to cause any fictitious increase of bulk, the potatoe mash being almost invariably allowed to pass into the state of fermentation, before it is added to the flour. It has been shown that by the substitution of flour or tapioca paste for water, in the bread-making operation, the weight of dough made from a certain quantity of flour is increased greatly, but this is at the expense of nutrition. Bone earth is one of the substances used to impart whiteness and increased weight to bread; but this confers no nutritive quality; on the contrary, it is

very indigestible, and, therefore, deleterious. Chalk is sometimes added to bread, and especially to biscuit, to give weight and whiteness, and this, also, is mischievous. Liebig has recommended the use of lime-water in the manufacture of bread; he considers that it not only improves the appearance, but supplies a want, that of lime, under which those who feed too exclusively upon this staff of life, frequently suffer. If the clear solution is used, it is certain that the quantity of lime is too small to be made subservient to any increase of weight, or practical alteration in the constitution of the bread, and the adulteration, if it be so considered, is a harmless one; and if the benefits attributed to it are really conferred, there is no good reason why it should not be practised; but, at present, there is nothing beyond the weight of the great chemist's authority to prove his hypothesis true. Alum undoubtedly imparts whiteness to bread, and is almost universally employed for this purpose; it gives to inferior qualities the appearance of those which are better, and, therefore, its use is liable to suspicion. It is yet an open question whether bakers should be allowed to use alum under certain restrictions; if the quantity be not large, we are inclined to think that it is by no means injurious, any more than is common salt, which is also used.

Sulphate of copper, commonly known as blue vitriol, is said to have the same effect as alum, and all the objections which can be urged against the employment of that astringent, apply with tenfold force to this; it can only be used in very minute quantities without imparting a blue tinge and a metallic taste to the bread. In Belgium, its use was once so prevalent that the Government interfered to check it.

Diseased Grain. Various diseases, such as smut, blight, mildew, &c., attack the cereal crops, and render the flour prejudicial, if not absolutely poisonous. Rye is especially liable to a certain fungoid growth, which establishes itself in the grain, and produces *Ergot of Rye*, which see; also, *Ergotism*.

The seeds of poisonous grasses, also, sometimes find their way into the hopper with the grain, and so become mixed with the flour; this should be carefully guarded against, or much mischief may result.

It has been said that the German yeast, now so largely employed by bakers, has deleterious qualities; but this charge remains to be substantiated. The subject is worthy of the fullest investigation, having so important a relation to the public health. See *Bread*.

Tea. This article of general consumption is often largely adulterated, but not, as the popular opinion goes, with sloe leaves, so much as with certain inferior kinds, and compositions, made up by the Chinese themselves, and which they have the honesty to call "lie" teas; they are prepared exclusively for the foreign markets; the celestials knowing better than to use them at home. They are an admixture of gum, brown earthy matter, and a little tea dust, just to give it a flavour. This lie tea was formerly imported by our wholesale dealers in much larger quantities than it is at present, the Excise having refused to allow it to come in under the lower scale of duty as a manufactured article, yet it is by no means extinct as a branch of commerce. Leaves of the sloe, and some other native trees, are perhaps used to some extent, and tea leaves that have once undergone the process of infusion are collected by certain active agents, dried and mixed with the fresh importations, in large quantities. But the most deleterious process which the tea undergoes is that of glazing and colouring, which is done mostly in China. Naturally the leaves of the plant, when dried, are of a dull slaty colour, or in the green sorts with just a verdant tinge: an increase of blackness is imparted by a coating of plumbago, and the green is deepened and made to sparkle by tale, turmeric and Prussian blue, which although comparatively an inert substance, is yet so much dead indigestible matter taken into the stomach, and therefore injurious. Thus much for *Tea adulterations*; we shall have to say more presently of this article under the heads of *Beverages, Drinks, Tea*.

Coffee. It is well known that the great agent of adulteration in this favourite beverage is the roasted and powdered root of the *endive*, or *chicory*, which see.

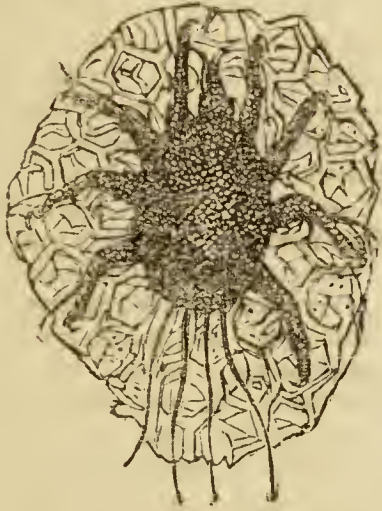
Those who prefer this admixture to the pure berry, as very many do, may continue to take it without injury to themselves; and there can be no objection to the grocers vending it, provided always they do so as a mixture, and at a proper price; it is best, however, for the customer to buy his coffee and chicory separate, and mix them as he likes; the former should be unground, or he may chance to get some of the latter with it, and so make a double adulteration, with, perhaps, ground horse-beans introduced into the compound. A while since, when coffee was much sold in canisters, they are said to have been sometimes filled according to a sliding scale—chicory, nearly pure, at the bottom; coffee, nearly pure, at the top; in the middle, about equal parts of

each. There is yet a good deal of canister coffee sold, and much of it is, doubtless, adulterated; but whether this ingenious practice is adopted we cannot say. An easy method of detecting chicory in coffee is to put a little of the suspected powder in cold water; if it be pure coffee it will scarcely impart a susceptible tinge of colour; if the endive powder be present, the fluid will quickly assume a ruddy tinge; but the most unfailing testimony is the microscope, which has recently been employed with such signal results by the Lancet Sanitary Commissioners. See *Beverages, Drinks, Coffee*.

Cocoa and Chocolate. That earthy colouring matter may be found in a great proportion of the preparations sold under the above names we have the testimony of Dr. Hassall to shew. Cocoa, flaked and granulated, paste and roll, and rock, homœopathic, and soluble, chocolate and broma, and the various dietary compounds manufactured from the original cocoa-nibs, all, or nearly all, have the taint of adulteration, although in many instances it should not perhaps be so called; starch, for instance, appears to be really necessary to suspend the insoluble portions of cocoa, and render it fit for a dietary drink. Unlike tea and coffee, whose active principles are exhausted by infusion, yielding a perfectly clear solution, cocoa must itself be taken, as it were, in the body, and as it sinks to the bottom speedily, unless held in solution by some tenacious matter; and as starch, be it of potatoe, wheat, sago, or whatever else of the farina, best effects the object, we should scarcely call the addition of this an adulteration. And sugar! what about that? It is wholesome, at all events, and betrays its presence by its sweetness; and then the preparations into which it enters are sold as compounds, not as pure cocoa. On the whole the Sanitary Commission cannot make out a very strong case against the cocoa sellers; the earthy colouring matter is the worst feature of the business, but this is not often present in any considerable quantities; when it is, its effects may be mischievous to some extent, although it would not be easy for the consumer to detect its presence. The surest plan to get perfectly genuine cocoa is to buy the nibs, grind, and prepare them at home for use. See *Beverages, Drinks, Cocoa*.

Sugar, we believe, is not adulterated to any considerable extent now, although when the duty, and, consequently, the price, was higher, it used to be. Moist sugars, and especially the inferior kinds, have in them many impurities no doubt,

but these can hardly be called adulterations: it may be true that sand is sometimes added to them, but this is such a clumsy, and easily-detected adulteration, that it could not be practised, to any considerable extent, without certain discovery. Much has been said about the sugar-mites, or acari; very ugly and disgusting, no doubt, and by no means pleasant to think about as articles of food; here is a picture of one magnified—



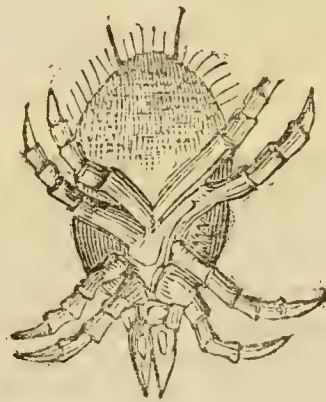
But then they are so very small, that we swallow them quite unconsciously, as we do animalculæ in almost every thing we eat and drink, and they do us no harm. Those who do not like the idea of feeding upon such invisible monsters should take lump sugar; it is cheap enough now. But then the animal matter, and lime, said to be used largely in the process of refining and crystallization! Dr. Hassall has found both in lump sugar, but then, as Scoffern observes, "their quantities are so infinitesimally small, that they can only be called impurities by comparison with a rigid chemical standard, which is altogether deceptive when used as a standard of purity for articles of food, drink, and medicine." There is, no doubt, a great admixture of different kinds of sugar made with a view to deceive the public, and this may fairly be called an adulteration; it is the moist or uncrystallized sugars only that can be tampered with in this way. See *Food, Sugar*.

Treacle and Molasses. These are distinct articles, although commonly confounded. The former, to quote Scoffern, is the uncrystallized refuse of refiners; the latter, the uncrystallizable refuse of the colonial sugar manufacturers; and it is hard to say which has in it the greatest impurities which necessarily enter into the composition, and are not introduced for any fraudulent or deceptive end. The more clear and

colourless these sweet articles can be obtained, the more pure they are likely to be; if they are very thin, we may suspect the presence of water—an innocent adulteration as far as its qualities are concerned, but sold rather too dear at 3d. or 4d. per pound. See *Sweets, Treacle, &c.*

Butter. The only adulteration which can be made in this article is the admixture of water and salt, for the sake of adding to the weight, but neither, we imagine, can be introduced to any great extent, as their presence in large quantities is easily detected. Rank or rancid butter will be taken by no one who can purchase better, and no dealer would be mad enough to adulterate the superior with the inferior kinds. On the whole, we may look upon this as almost an unadulterable article. See *Butter, Diet, Food*.

Cheese may be more open to sophistication, although this is a delicate article to tamper with. Colouring matter is constantly employed in preparing both this and butter for the market; but the annatto commonly used is perfectly harmless; and if consumers prefer to have these condiments a rich, yellow tint, there is no reason why the fancy should not be gratified. We give a cut of the cheese mite, a beautiful object under the microscope—not so agreeable to look at here. See *Cheese, Diet, Food*.



Many other articles of general consumption, which may properly be called *ingesta*—that is, food or medicine taken into the stomach, whether liquid or solid—might be mentioned here, but it will be better to speak of the adulterations to which they are liable under their several heads.

Adulteration of Medicines. It has been proved, by recent investigations into the character of the drugs and medical compounds chiefly used in the treatment of disease, that they are often considerably adulterated, and hence they fail to produce the effects expected by the physician who prescribes them. We shall speak more fully

of these adulterations when we treat of the several articles on which they are practised; and, in the mean time, may just observe, that it is scarcely possible for the public to guard against them; they are effected chiefly at the wholesale houses in London, and at the drug grinders. The country druggist, we believe, seldom tampers with them, and is only answerable for their purity in so far as his chemical knowledge goes, and this is, sometimes, not far. He should be careful to deal only with houses of established reputation, and to pay the full market price. Cheap drugs, like cheap every thing else, cannot be of the best quality; they must have become damaged, or have undergone sophistication of some kind, to reduce their cost and value. Adulteration of many of them may be detected by colour, weight, or flavour, by those experienced in pharmacy. Chemical analysis and microscopical examination will detect nearly, if not all; and every druggist ought, in reality, to be what he professes—a chemist also, so that he shall not only be able to prepare physicians' prescriptions accurately as ordered, but guarantee to his customers a supply of pure, unadulterated drugs, and compounds of the proper strength and quality. See *Drugs, Medicines, Prescriptions*.

ADUSTION (from the Latin *aduro* to burn). The action of heat as applied to the body. **Animal heat**.

ADVENTITIOUS (from the Latin *advenio*, to come to.) A term applied to false membranes; or to diseases that are not hereditary.

ADVICE, MEDICAL. In times of sickness it is natural and right that we should resort to a medical adviser, and ask his aid to relieve the malady which affects us. Many who are necessitated to do this have not sufficient knowledge to form a proper estimate of those whom they consult; and a vast number cannot find the means to remunerate a qualified medical practitioner; while some, who ought to be better informed, and who can afford to pay for the help required, go by choice to quacks and other ignorant persons. But whatever the causes are, certain it is, that medical advice is more frequently asked of the druggist, or some other unlicensed practitioner, than of the "regular doctor," who is often only called in when the case is desperate, and the patient begins to despair of obtaining relief. This is a state of things for which there is no remedy, save in the growing intelligence of the public at large. Ignorant pretenders to medical skill, cannot long deceive those who are sensible and well informed. It is the

object of this book to *give* medical advice, but only in those cases in which it is unnecessary, or impossible, to obtain it from a professional man. It is also our object to diffuse such information on the structure of the human frame, the functions of its organs, the action of remedies, &c., as will render persons better enabled to judge of the qualifications of their medical advisers, and more inclined to seek help in their emergency from such as are guided by scientific principles in their treatment of disease. Medical advice, to be worth following, should be clear and distinct, given without hesitation or ambiguity, received with implicit confidence, and acted on promptly and vigorously. Too often, the efforts of the medical adviser are rendered nugatory, because his directions are not properly carried out; if the patient confides not in his skill and judgment, there is little hope of his effecting a cure. Our advice to our readers then, is, ask medical advice only of those whom you are assured are qualified to give it, and having asked it, follow it implicitly; and, if you are able, duly reward the giver; if not, let him have your respect and lasting gratitude.

ÆDOIA (from the Greek *aidoor*, pudor). The pubenda. Hence we have the terms *Ædo-ptosis*, a prolapse of one or more of the pubenda. *Ædo-psophia*. Noise occasioned by the expulsion of wind from the urethra, or per vaginam.

ÆSCULINE, an alkali discovered by a French chemist, M. Carzonerè, in the Horse-Chesnut, and found to possess febrifuge properties. It may be given in port wine, or bitter infusion, in 2 grain doses three times a-day.

ÆGLE MARMELAS (*Bael*, or *Bela*, sometimes called the *Bengal Quince*), belongs to the natural order *Aurantiaceæ*. A decoction of the root is used in Malabar as a remedy for hypochondriasis, melancholy, and palpitations of the heart; and of the leaves for asthma. In this country the bark of the root and the prepared fruit have been employed, although not to any great extent, in irritation of the mucous membrane, and costiveness arising from debility. The unripe fruit, being astringent, has been found serviceable in dysentery and diarrhœa: 2 ounces of it put into a pint of water, and boiled down to half the quantity; a wine-glassful of the strained decoction to be taken twice or thrice a-day. For habitual costiveness, take—Extract of *Bela*, 2 scruples; compound *Rhubarb*, or *Aloes pill*, 1 scruple; make into 12 pills, one to be taken every day, an hour before dinner.

ÆGOPHONY (from the Greek *aix*, a goat, and *phone*, sound). A peculiar sound, which may sometimes be detected in using the stethoscope, thought to resemble the bleat of a goat. See *Stethoscopy*.

ÆGOPIDIUM PODAGRARIA. An English wild plant, variously called Gout-wort, Ash-weed, and Herb-Gerard, the root and leaves of which were formerly much used for gout, and still are to some extent by country people.

ÆGYLOPS (from the Greek *aix* a goat, and *ops* the eye). A sore just under the inner angle of the eye, so called from the supposition that goats were especially liable to it.

ÆRUGO is the Latin term of rust, or subacetate of copper. This is a strong metallic poison, and accidents have sometimes occurred from its employment as a pigment. See *Poisons*, *Verdigris*.

ÆSCULUS HIPPOCASTANUM (*The Horse-Chesnut*). The bark of this tree has been used as a substitute for *Cinchona* in cases of ague, intermittent fever, &c. The dose is about 2 drachms of the powder taken



twice a-day. The decoction may also be prepared and taken in the same way as that of *Cinchona*, which see.

ÆTHUSA SINAPIUM (*Fool's Parsley*, or *Lesser Hemlock*). A common wayside plant, of the natural order *Umbelliferae*, the leaves of which are poisonous, producing nausea, vomiting, spasmodic pain, numbness, &c. See *Hemlock*, *Poisons*.



ÆRATION OF THE BLOOD is the process which takes place in the lungs, when the blood, passing in minute vessels over a large surface, only divided from the air just inhaled by a thin membrane, parts with its superfluous carbon, obtains a fresh supply of oxygen, and so becomes fitted for the support of the vital functions. This process, like the circulation, is continually going on; were it stopped for a moment, the effect would be fatal. Where there is much impurity in the air, this æration of the blood cannot properly be performed, and the whole system soon feels the deprivation of a sufficient supply of oxygen. In a pure, fresh, bracing atmosphere, what vigour is infused into the frame, how light and elastic becomes the step, unless disease has impaired the vital powers, and even then, there is an unwonted, although perhaps but a momentary energy, felt by the patient; the blood then is properly ærated, and goes coursing through the veins at an accelerated pace. See *Air*, *Blood*, *Lungs*, *Respiration*.

ÆROPHOBIA (from the Greek *acr*, air, and *phobos*, fear), a dread of fresh air. This is one of the symptoms of approaching *hydrophobia*, which see.

ÆSTHESIA (from the Greek *aesthesia*, sensibility), perception, feeling. Hence, too, the terms *Dys-æsthesia*, defective perception; *An-æsthesia*, absence of the sense of touch; and *Æsthetorium*, the sensorium.

ÆSTRIS VOLUTICUS (from the Latin *æstus* heat, and *volo* to fly). A term applied to transient heats in the face. See *Erythema*.

ÆTHER (from the Greek *aither*). A highly volatile and inflammable fluid, produced by the action of acids on alcohol; thus we have Acetic, Hydrochloric or Muriatic, Nitric, Nitros, and Sulphuric Ethers, and of some of these more than one form of preparation. The first of these (*Ether Aceticus*) is much employed on the Continent *internally* as a mild stimulant, diaphoretic, antispasmodic, and nervine; the dose is from 5 to 30 or 40 drops; *externally*, in stimulating liniments; and, by itself, in gentle friction, for gout. The second (*E. Hydrochloricus*) is diuretic and diaphoretic, in doses of 10 to 30 minims; there is also a Spirit of Muriatic Ether not so strong, the dose being from 20 minims to 1 drachm. The third (*E. Nitricus*) and the fourth (*E. Nitrosus*), are both mildly stimulant, and more decidedly diuretic than the others, if the patient is kept warm; the dose of the latter is from 10 to 20 minims; the former, which is generally sold in a diluted form, as Sweet Spirits of Nitre, may be given in drachm doses; it is a favourite remedy in colds, especially if attended with febrile symptoms and obstructions of the urinary passages. The fifth (*E. Sulphuricus*) is, in its diluted form of Spirits of Sulphuric Ether, the kind to which the name Ether is most generally applied; it is a diffusible stimulant much employed, on account of its rapid effects, in spasmodic asthma, cramp of the stomach, colic, hicough, palpitation, fainting, and other spasmodic and nervous affections; the dose is from 20 minims to $\frac{1}{2}$ a drachm. Applied externally, it produces cold by its rapid evaporation; or if the vapour is confined, it acts as a stimulant and rubefacient. Its inhalation produces insensibility to pain, and, before the introduction of chloroform, it was much used in painful and protracted operations, although fatal results have followed its use in this way. There is a Compound Spirit of Sulphuric Ether, sold under the name of Hoffman's Anodyne Solution, which was once extensively used as a nervous stimulant, the

dose $\frac{1}{2}$ a drachm to 1 drachm. There is also an Aromatic Spirit of Ether, prepared with spices,—a grateful but not a very useful stimulant; it is not retained in our later editions of the Pharmacopœia. There is, too, an Etherial Oil (*Oleum Ethereum*) which is only used as an ingredient in the Compound Spirits of Ether. Chloric Ether is a solution of chloroform in alcohol. See *Anæsthetics*, *Chloroform*, *Inhalation*.

ÆTHIOPS (from the Greek *aitho*, to burn). A name given, for an obvious reason, to certain dark-coloured metallic preparations used in medicine; they have now gone nearly out of use. *Æthiop's Mineral*, which may be found in our Pharmacopœias, under the name of *Hydrargyri Sulphuretum cum Sulphure*, being a compound of Sulphur and Mercury, it is given in scrofula, and diseases of the skin.

AFFINITY (from the Latin *affinitas*), used in chemistry to signify the kind of attraction which different classes of bodies have for each other. It may be *single*—that is, the power by which two elementary bodies combine; or *elective*, which expresses the preference which a substance manifests in combining with one, rather than with another body. In compounding medicines, it is necessary to avoid putting together those which are *incompatible* with each other, taking care that there is a proper *affinity* between the ingredients; and here we find occasion to employ two other terms, viz., *divellent* and *quiescent* affinities. By the former, we understand those attractions which tend to destroy the original compounds, and to form new arrangements; and, by the latter, those which tend to preserve the original arrangement of the component parts.

AFFLATUS (from the Latin *afflo*, to blow to). A kind of *crysipelas* which attacks persons suddenly, like a blight.

AFFUSION (from the Latin *affundo*, to pour upon). The pouring of cold water over the head or surface of the body; sometimes, but not often, practised in fevers, especially *Scarlatina*, which see. The method of it is this:—Seat the patient in a tub, and dash a pailful of cold water over him; then wipe him thoroughly dry, and put him to bed as quickly as possible. If the operation is properly performed, it ought to be followed by a glow over the surface of the skin, and a pleasant sensation of relief to the whole system.

AFTER-BIRTH. In medical language the *Placenta*, which see.

The removal of the after-birth from the womb, is often a delicate and dangerous

operation, and should never be attempted by any other than the medical attendant, except when his aid really cannot be procured. It is very commonly discharged without any other assistance than the natural power of expulsion given to the womb, within an hour or so after the delivery, sometimes immediately after, and until it is, there must be considerable anxiety as to the result, the labour pains caused by the contraction of the womb, continuing at longer or shorter intervals to rack the patient, and serious flooding generally coming on, if the offending substance is not quickly removed. When the *after-pains*, as they are called, are protracted beyond the period above-named, and the placenta does not come away, the medical man, or failing him, an experienced nurse, will generally attempt to assist nature in its removal; one hand is pressed on the lower part of the abdomen, and the other, well oiled, is passed gently into the womb, so that it can grasp the after-birth, and without breaking or tearing the substance, bring it carefully away from its point of adhesion, waiting for a return of the after-pain, to remove it entirely. Force must not be used unless the case becomes desperate, and the patient appears likely to sink from a continuance of the pains and loss of blood, in which case it is better to risk tearing it away; but in all cases dexterity is better than force. By giving the after-birth a slightly twisting motion as it is withdrawn, the membranes which line the interior of the womb during pregnancy, may generally be detached, and brought away with it; but if they cannot, they may be safely left to be afterwards discharged, as they do not cause the irritation which the placenta does. It sometimes happens that the after-birth, before labour, obtains such a position near the orifice of the womb, as to prevent the delivery; it may be suspected that this is the case if a free discharge of blood takes place simultaneous with the occurrence of the labour pains, the more especially if the discharge increases with each recurrence of the pains; in this event, an examination should be instituted, and if possible, the removal of the placenta accomplished at once. The best means to be adopted in this, as in all cases of hæmorrhage from the womb, are gentle but firm pressure over the bowels generally, but especially the lower portion, and the application of cloths dipped in vinegar and water, frequently renewed, to the hips and thighs; if the flooding be kept up in small quantities for a long time, a stream of cold water thrown into the womb

by means of a common enema syringe may be of service. Stimulants, such as brandy or sal-volatile, must be administered in sufficient doses, if there are symptoms of fainting or exhaustion from the loss of blood. See *Flooding, Labour*.

AFTER-PAINS. These are the pains spoken of above as attendant on the efforts of the womb to relieve itself of the placenta. If they continue violent several hours after delivery, an anodyne draught, consisting of Tincture of Opium 25 minims, Pennyroyal, or Mint water 1 ounce, should be administered, and repeated every six hours while necessary. Surgeons very commonly order such a draught to be given soon after childbirth, even when the pains are not very severe; a hot flannel applied to the abdomen often affords some relief. An overloaded state of the bowels will frequently protract these pains, therefore it is best for the patient to take a table-spoonful of Castor Oil, with one of the above draughts. There is often a continuance of after-pains for 24 or even 36 hours; if following close upon labour, and continuing constant and unremitting, there is reason to suspect internal flooding, they are sometimes aggravated by overtight bandaging. See *Flooding, Labour*.

AGARIC (from the Latin *agaricum*), The general name of the mushroom family, comprehending many hundred species of *fungi*, some of which are, or were, used medicinally: thus in old Pharmacopœias will be found Surgeons' Agaric (*A. chirurgæon*), and Agaric of the Oak (*A. quercus*), a fungus formerly much given for internal hæmorrhages. See *Fungi, Mushrooms*.

AGARICUS MINERALES. The *Mountain Milk*, or *Mountain Meal*, of the Germans, found in clefts of rocks, &c. It is one of the purest carbonates of lime yet discovered in a natural state. It has been much used on the Continent, internally for hæmorrhages, and externally as a dressing for ulcers of long standing.

AGE (in Latin *ætas*, thought by some to be derived from the Teutonic *a a*, which signified long duration). We have here to consider it as a term including the several states or stages of human life, which the best Roman writers divided into nine periods, as follows:—1st. *Ætas firmata*, the prime or full strength of man, about the age of thirty. 2nd. *A. constans*, the steady age, about forty. 3rd. *A. matura*, about fifty. 4th. *A. provecta*, advanced age. 5th. *A. ingravescens*, the burdensome age, expressing the weight of years. 6th. *A. decrepita*, decrepit age. 7th. *A. affecta*, the

state of decay. 8th. *A. exaeta* or *precipitata*, the decline of life. 9th. *A. extrema*, the approaching end. Physiologists have generally agreed to divide life into six natural epochs, viz. infancy, childhood, boy or girlhood, adolescence, man or womanhood, and old age. The first period commences at birth, and extends to the end of the second year, by which time the first dentition is generally completed: the second extends to the end of the seventh or eighth year, when the second dentition is commonly over: the third period extends to the age of puberty, which is much earlier in some countries than in others; with us, in the female, it is from the twelfth to the fourteenth year, and in the male from the latter age to sixteen: the fourth period extends to the twentieth year of the female and the twenty-fourth of the male: the other periods are not determinable with any degree of exactness, especially the lapse into old age, which differs greatly in different individuals, and depends on primitive constitution, management in infancy and childhood, regimen, exercise, occupation, and other circumstances, included in what are generally called "modes of life."

In these different epochs considerable changes are observable in the physical condition of the body; they are closely connected with and dependent on the operation of a principle of consolidation, which, commencing with the first dawn of existence, continues up to its latest moment. Hence the diseases incidental to the several stages of life are of a specific character, according with the increasing, settled, or diminishing energy of the vital functions, and the peculiar states of the tissues. That which is but healthful vigour at one period may be destructive violence at another; and that which is but sufficient to produce moderate excitement in the one case, may produce fatal stimulation in the other. Many important phenomena connected with health and disease are dependent on the difference in the distribution of blood, and other changes in the system which take place at the several epochs of life. From infancy up to maturity there is a gradually diminishing preponderance of blood in the capillary arteries; in the full pride and vigour of life the quantity of arterial and venous blood in circulation is about equal; after that, the latter increases and the former continues to diminish, the circulation becomes more slow and sluggish, and there is less of animal heat, less power to repel the attacks of disease, less activity in the brain, and all through the channels of nervous

sensation. The vital powers altogether are beginning to exhibit signs of decay, which will sooner or later end in death. And this is

OLD AGE, on which, leaving the other periods of life, such as *Infancy, Childhood, &c.*, to be treated under their proper heads, we have now to make a few remarks. Fourscore years and ten is now the general term of human existence, whatever it might have been in the times of Biblical history; with women the fifty-third, and with men the sixtieth year, may generally be considered that in which they begin to exhibit signs of infirmity and decrepitude. Diseases incidental to this stage of life then come into play, and their effect upon the habit and constitution are soon manifest. Especially do such hereditary diseases as gout, gravel, rheumatism, apoplexy and paralysis, arise, to make a wreck of the constitution; and cancer, more particularly in women, commits its ravages, eating into the springs and sources of life, and destroying its victims with deadly certainty. Now it is that any excesses committed in the earlier periods of life, any habitual infringements of the laws of health, are found to have told upon the constitution, although this was not apparent in the full vigour of manhood. Now it is that we find impaired powers of respiration, and of secretion, and of digestion, rendering it necessary to be careful in the air we breathe, the exercise we take, and the food we eat; the latter should be light and nutritious, taken in small quantities, and at short intervals; if meat, and the teeth are defective, it should be minced before cooking, or cut up small afterwards.

It is best for aged people to take dinner early, and a light supper always, unless there is some peculiarity in the state of health to render this inadvisable. Early to bed, but *not* early to rise, is the rule at this period of life; the aged require much sleep, or, at all events, much rest, for with them deep slumber is commonly of short duration, and the recumbent position affords all the rest they need; retired as they commonly are from the busy occupations of life, they know not the weariness which results from active exertion, either of the physical or mental powers. Narcotics should never be taken to produce sleep, unless the wakefulness be occasioned by some painful disease.

Exercise should be taken by the old as long as their failing powers permit, but not carried to the extent of great fatigue.

Warmth is essential to their comfort and

health; they should be wrapped in flannel, and kept in an equable temperature; it has been noticed that on the setting-in of a frost, the number of old people who have died of apoplexy and paralysis has much increased.

Cleanliness, although often neglected by the aged, or those who have the care of them, is very necessary to the preservation of life; the body should be frequently sponged with tepid water, and afterwards rubbed with a rough towel; the feet should be often washed, and the face and hands kept perfectly clean.

Amusement is as necessary to the old as to the young, but it should be of a quiet, unexciting nature. If unable to read themselves, they should be read to, and talked to, and listened to, for one of the greatest pleasures of age consists in old memories and associations. Aged persons live very much in a world of the past, and if sometimes tediously garrulous, it should be remembered, that from them this world, with its exciting hopes and depressing cares, is rapidly passing away; and that in the circle of life, with them nearly completed, the beginning and the end approach each other, until they finally join,—birth and death forming the uniting points.

Medicines for the old should be of a warm and somewhat stimulating nature; alkalines should be avoided, unless absolutely required for the counteraction of a tendency to acid in gout or gravel, and then their action should be carefully watched, as a long continuance of them may probably create a greater evil, than that which they are intended to obviate.

Aperients are often required by old people, but violent purgatives seldom; these last should be avoided as much as possible; also mercurials, except in very small doses; and neutral salts, which are of too cold and griping a nature. Compound Infusion of Senna, with a little Tincture of Ginger, Gentian, or Cardamums, added to impart warmth, and relieve the tendency to flatulency so common at this period of life, may be safely given. About an ounce of the Compound Decoction of Aloes is a good stomachic aperient; but if there is a tendency to piles half an ounce of Castor Oil in a little weak gin and water is good for those whose urinary organs require stimulating; the action of these should be carefully watched, and medical advice obtained on the slightest symptom of derangement, as the want of proper attention in time frequently entails consequences which render the after years those of misery and discomfort. Voiding

the urine with old people is a work of time and difficulty; it should always be performed when the inclination arises, and never in a hurried and imperfect manner. See *Urine*.

Five grains of Compound Rhubarb pill, given at bed-time every night, or as often as required, is a good mild aperient for the aged, but it should be fresh and soft, as should all pills, or they will probably pass through the bowels unchanged. Oatmeal gruel, with figs or baked apples, will, of themselves, often prove sufficiently relaxing; if so, it is best to avoid aperient medicines altogether. For treatment of the diseases to which the aged are particularly liable, reference must be made to their several heads.

AGRIMONY (*Agrimonia eupatoria*), a plant of the natural order *rosaceæ*, common all over England in the hedgerows, pas-



tures, and wood-sides. The leaves are astringent and aromatic, and have been found useful in the preparation of drinks for fever and slight inflammation of the

mouth and throat. Hence it has been always reckoned among our medical wild plants, and much used by herbalists.

AGENNESIA (from the Greek *a* not, and *gennao* to beget). Inability to beget offspring. See *Sterility*.

AGEUSTIA (from the Greek *a* not, and *geustia* to taste). Defect or loss of *Taste*, which see.

AGLACTIA (from the Greek *a* not, and *gala*, milk). Defect of milk after child-birth.

AGLIA (Greek *aglie*). A whitish speck in the cornea. See *Eye*.

AGNES CASTUS (*The Chaste Tree*). A species of *Vitex* formerly celebrated as an antispasmodic, but not now used. Also sometimes applied by old writers to the Castor Oil Tree (*Ricinus communis*), from the cleansing effects of the purgative which it produces. See *Castor-Oil*.

AGOMPHASIS, or AGOMPHOSIS (from the Greek *a* not, and *gomphos* a nail). Applied to looseness of the teeth.

AGRIPPA (from the Greek *agra* capture, and *pous* a foot). A child born with the feet foremost; hence the name of some celebrated Romans.

AGRYPNIA (from the Greek *agra* a capture, and *upnos* sleep). Watchfulness. Want of sleep.

AGUE. An intermittent fever, characterised by cold fits succeeded by hot; very prevalent in damp, marshy districts. Between the paroxysms, or periods, there is a perfect intermission when no fever is present, and the patient feels only the lassitude resulting from debility, and can often go about his ordinary employments, if they be not too laborious. Agues have been divided in accordance with the paroxysmal periods, into—1. *Quotidian* or daily, having an interval of twenty-four hours between the attacks; 2. *Tertian*, or third-day, having an interval of 48 hours; 3. *Quartan*, or fourth-day, having an intermission of 72 hours between each attack; and 4. *Erratic*, when the return of the fever goes beyond the latter period, and is commonly irregular in its recurrence. There are several other distinctions of the fever such as *spurious* and *imperfect*, and many nice divisions of the more common forms, but they are of no practical utility. The paroxysms of ague are divided into three tolerably regular stages;—1st., the *Cold Stage*, when the chill creeps over the system, the colour departs from the lips, the face becomes deadly pale, and the whole frame shivers and trembles as though smitten by a frosty wind, the pulse becomes slow and the veins seem filled with ice; there is

generally nausea and faintness, and an utter prostration of strength; the patient has no power to stay the convulsive trembling of his every limb and joint, and which continues for a longer or shorter interval, as the case may be, and is succeeded by—2. The *Hot Stage*, when the warmth of the body gradually returns, at first irregularly, by transient flushes; then by a steady, dry, burning heat, which rises much above the natural standard; the lips resume their colour, the cheeks are flushed, the tongue is parched and white; there is a sense of fulness in the head, and flying pains in the loins, back, and other parts of the body, accompanied sometimes by a twitching of the nerves, and a difficulty of respiration; there is great thirst, and the urine is highly coloured, and burns as it is voided, the pulse is quick, strong, and hard, as in more sustained fevers. Then comes—3. The *Sweating Stage*. At first a slight moisture breaks out upon the face and neck, and this is succeeded by a profuse general perspiration; the temperature of the body falls gradually to the natural standard, the pulse softens and diminishes in frequency, the respiration becomes more full and free, the pains depart; there is a desire to evacuate the bowels, and all the animal functions are restored to their proper order. This is the common routine of an ague visitation; the length of the stages differ considerably in different cases, and so consequently does the whole duration of the attack, which may last from six to twelve hours or more, and its return may generally be calculated on with great certainty, so that the patient may prepare himself for it. Sometimes the attacks are accompanied by more severe symptoms, such as fainting fits, convulsions, cramps, spasmodic affections, and even delirium. It has been observed that the quotidian has the shortest, and the quartan the longest cold stage; of the three kinds the tertian is most common, and this occurs as much at one season of the year as another, while the quotidian makes its attacks mostly in the spring, and the quartan in the autumn. This seasonal occurrence of the disease has given occasion for the names *autumnal* and *vernal* (spring) ague, by which it is sometimes distinguished. Again, it has been noticed that the quotidian usually comes in the morning, the tertian at noon, and the quartan in the afternoon, although the exceptions to this rule, if such it may be called, are very numerous. Then, again, the different kinds of ague frequently change or lapse into each other, increasing

or diminishing in the frequency of the attacks, according to local circumstances or the action of the remedies taken; very seldom does the disease leave the patient at once, but retires slowly, as though loth to be beaten; most probably the quotidian becomes a tertian, then a quartan, and then again erratic, before it finally discontinues its attacks, which also become gradually lighter and of shorter duration, until they cease altogether.

Ague attacks, almost indiscriminately, persons of all ages and conditions of life, more perhaps those of the middle age than any other, and men more than women. If poor people are generally more aguish than rich, it is simply because they are more exposed to its

Exciting Causes. The principal of which is marsh *miasma*, or *malaria*; that is, the effluvia arising from lands that have been flooded, and afterwards exposed to the heat of the sun, which draws up the moisture in the form of vapour, laden with deleterious gases, from decomposed animal and vegetable substances. Not always does the person inhaling this experience the attack of ague at once; the disease seems to be, as it were latent in the system, and to be called into activity by a particular state or condition of the body, or by some other circumstances favourable to its development, such as wet or cold weather, exposure to night air, over anxiety, want of rest or food, or aught which tends to debilitate the system. It has been contended by Dr. Snow, that merely atmospheric agents do not communicate ague, but that it enters the system by the alimentary canal, by means of the marshy and stagnant water drunk by those who live in low-lying districts. It may be so to a certain extent, but not altogether; it is by the lungs chiefly we are inclined to think that the poison enters. And what are its effects upon the internal economy? It causes a distension of the liver and of the spleen, the former being called *gall-cake*, and the latter *ague-cake*; the proper circulation of the blood is interfered with; it accumulates in the veins of the viscera generally; the functions of the liver and the alimentary canal are disturbed, and the consequences are such as we have endeavoured to describe.

Treatment. Ague may generally be considered as a curable disease; in dry and temperate climates especially; the more regular forms of attack are the least dangerous; when it comes at irregular periods, as it sometimes does, with great violence, and when the patient is prostrated by some other sickness, it is likely to prove fatal, especially

if of long standing. Sometimes a mere change of residence to a more dry and airy locality, with proper attention to diet, will suffice to check it; and should these measures not succeed, there is little danger in allowing it to run its course, unless the patient should be weakly, in which case medicines should at once be resorted to.

It is not often that a first attack of ague can be anticipated: and during the paroxysm efforts must be directed to alleviate the severe symptoms, to shorten its progress, and avert the danger of internal congestion. In the cold stage, we should apply artificial warmth, such as hot water bottles, or a mustard bath, to the feet, mustard poultices to the pit of the stomach, friction of the back with stimulating liniment—say Soap Liniment and Spirits of Turpentine, equal parts—and the use of the hot-air bath in extreme cases. Negus, tea, gruel, barley-water, or any warm, diluent drinks, may be given: and should the fit prove long and severe, a draught, consisting of Tincture of Opium and Æther, or Compound Spirit of Ammonia, of each half a drachm, to an ounce of Camphor Mixture or Peppermint Water. When the hot stage comes on, the body should be sponged with cold water; and cool drinks, such as Lemonade—if iced, so much the better—be given. Should no Laudanum have been previously administered, a half drachm dose, without any stimulant, but with a drachm of Liquor of Acetate of Ammonia, may be given, unless there is congestion of the veins of the head, or delirium, in which case leeches, or cupping, on the temple should be resorted to, and the opiate avoided. In the sweating stage, the patient should be kept as tranquil as possible; moderate the perspiration, and, if the exhaustion is great, administer a little weak spirits and water. When the fit is over, dry the surface of the body with warm towels, put on clean, well-aired linen, and have a warm bed ready for his reception. During the intermission of the paroxysms, a mixture like the following may be taken:—Sulphate of Quinine, 12 grains; diluted Sulphuric Acid, 24 minims; Camphor Mixture, 6 ounces. Mix, and take two tablespoonfuls every four hours. Should this not prove effectual, or should it cause, as Quinine sometimes does, a throbbing in the head, it is best to try Solution of Arsenite of Potash, 5 minims, three or four times a-day, in any convenient vehicle; the dose may be gradually increased to 10 minims; but the action of this remedy must be carefully watched, as too much of it may act prejudicially on the system. Should there be tremours, griping pains in

the stomach and bowels, or itching of the face and eyelids, let it be at once discontinued. Large doses of Quinine, say 10 grains, will sometimes arrest an attack of ague, if taken just as it is coming on, and so sometimes will anything making a strong impression on the mind, such as fear, hope, joy, anger, &c. Sulphate of Zinc is a good remedy for ague; 3 grains of it made into a pill with Confection of Opium, may be taken three times a-day, the dose to be increased a grain every day until it reaches 10 or 12 grains. No fluid should be swallowed for some time after the dose, or it may cause vomiting. Finely powdered Charcoal, twenty grains in brandy and water, every three or four hours, has been recommended by good authorities, and so have 10-grain doses of Cobweb, formed into pills with syrup or mucilage. Bitter infusions, such as Quassia, and Gentian, or Camomile, are no doubt serviceable in this disorder, during the progress of which purgatives should be occasionally administered: from 3 to 5 grains of Calomel, over night, and a draught of Rhubarb and Magnesia in the morning, will prove the most efficacious.

When the patient is recovering, tonics are required; any of the preparations of iron will be serviceable, and bitter infusions. A change of air is most desirable, and a good, generous diet. The above directions will apply for the most part to children, giving half-doses of the medicines and avoiding opiates; they may take the Sulphate of Zinc with a little moist sugar, or instead of Quinine, half a wineglassful of Decoction of Bark, three times a-day. See *Arsenic, Cinchona, Intermittent, Quinine.*

AIR (Latin, *aer*). The element encompassing the terraqueous globe. See *Atmosphere*. The fluid which we breathe, considered by ancient philosophers a simple element, but found by modern chemists to consist of two simple substances, or gases, called *oxygen* and *nitrogen*, or *azote*, in the proportion of 23 parts of the former to 77 of the latter, by weight, in every hundred: these are about the proportions, under all circumstances, of pure air; but other elements enter into the composition of that which we breathe generally, and the quantity of these by which it is rendered offensive and injurious, cannot be so easily estimated; they are only known by their mischievous effects upon the delicate tissues with which they come in contact, and we speak of them, in their associated form, as *malaria* (a Latin term, signifying *bad air*), which see.

The residuum of air expelled from the lungs, after it has served the purposes of

respiration, is carbonic acid gas, to breathe which in any considerable quantities is destructive of animal life; hence the danger of inhaling deteriorated air, as in ill-ventilated rooms where a number of persons are congregated, and other close places—such as the Black Hole at Calcutta, in which 140 prisoners were thrust over night, and but 20 came out alive in the morning. The air of crowded cities must always be unhealthy, partly on account of the excess of carbonic acid gas which is mixed with it, partly from other impurities—such as soot, from the chimnies (carbon), and effluvia of decayed animal matter (ammonia), &c., of which it becomes the vehicle, and the more closely the houses are packed together, the narrower the streets, the greater is the mischief resulting from these causes. Aqueous vapour, such as fog, and mist, and exhalations from pools and swamps, and marshy places, also contribute greatly to the impurity of the air; hence the necessity for a proper system of drainage, and for placing the dwellings of men as much as possible in dry and elevated situations. On broad rivers, where there is a constant flux and reflux of the tide, the air is kept well in motion; and thus many of the impurities arising from the crowding of human habitations, and the working of manufactures in the busy entrepôts of commerce are carried off, otherwise they would be like so many lazar and charnel houses: as it is, the rate of mortality in them is often fearfully high, and death exacts a heavy ground-rent for the advantages of position. When, as is unfortunately too often the case, the sewerage of a great city is suffered to run into the channel of water communication, along whose banks its wharves and warehouses are built, the water becomes filled with putrid and feculent matter, which gives out noxious gases; these mingling with the atmosphere, and entering into the circulation through the lungs, poisons the very springs of life, producing fevers and other epidemics, which commit great ravages among the population, especially the ill-fed and worse clothed lower classes.

"Pure air and plenty of it," is the maxim of the true man of science; give the lungs free play, and supply them with this great pabulum of animal life, oxygen, and the chances are that the child will grow up healthy and vigorous, provided the food be nutritious and of sufficient quantity, and there be no hereditary disease, which circumstances may develope. Better is it that the winds of heaven should visit the frame a little too roughly, than that they should

not visit it all; but better still is it that they should be suffered in their calmer and gentler moments to play about the persons, and pass unrestrained through the habitations of men; but checked in their wildest fury, and guarded against by warm clothing, and carefully closed doors and windows, and all the comforts of the family fire-side. We are no advocates for unnecessary exposure to air, especially cold air; the winds, those invisible messengers of health, clearing and purifying the atmosphere as they sweep along, are also sometimes messengers of sickness and death. Many of the diseases of the lungs and chest, which have borne their victims into early graves, have owed their rapid development, and often their origin, to the keen northerly blasts, and cutting easterly gales of our island home, noted for the large proportion of deaths from consumption which occur in its rolls of mortality. Let us, then, while impressing upon our readers the necessity for a good supply of pure fresh air, also warn them against the mistake of supposing that they cannot have too much of it; in our northern clime it is very possible to do so.

Air in Nurseries should be admitted very freely, during fine weather and in temperate seasons. There should be an open fire-place, with a tolerably wide chimney; and a window on the opposite side of the room, which being opened in hot weather, a current of air could pass right through the room; if the stove be a close one, and there is no chimney, there should be one or more openings in the wall of the room near the top, or the ceiling, with perforated zinc let in. It has been calculated that, even under favourable circumstances as to ventilation, about 1,000 cubic feet of space is required for the due supply of one set of human lungs with air, and, when the necessary collection of a large family in one room renders this space unattainable, the air should be changed as often as possible, by the throwing open of doors and windows, the inmates of the room retiring to another.

Air in Bed-rooms. This generally, by the morning, becomes vitiated by the quantity of carbonic acid gas exhaled by the sleepers, and requires a thorough change, which can only be effected by the opening of the windows, if there be one on either side of the room, or if they be opposite an open fire-place, or a door which can be set wide back; if this latter can be moved gently backwards and forwards, so as to put the air well in motion, it will facilitate the purifying process. The bed-room should be vacated as soon after dressing as possible,

and nothing but urgent necessity should keep the sleeper therein during the day. The bed-room for children should always be distinct from the nursery, and all windows left open through the day; unless in damp foggy weather. Care should be taken to close it, and all bed-rooms before the night comes on, as in this climate, even in summer, there is generally a degree of moisture in the air at night, which is prejudicial to the health of those breathing it, especially in sleep. We are no advocate for leaving bed-room windows open through the night, however warm the weather may be; the door left ajar, with the chimney-board down, will afford quite sufficient ventilation, and obviate the risk of a chill to the person, exposed as it often is, in the restless tossing so usual in extreme heat.

Air in Dwellings. What we have said on the preceding heads will, to a certain extent, obviate the necessity for enlarging much on this; it must be obvious that if certain rooms require good and sufficient ventilation, the whole house assuredly does. Fire places in all the rooms of a house should be sufficiently capacious to admit of a thorough draught, and on no account should any of them be stopped up with fire-boards, except in the bed rooms, and then only in very severe weather and during the night. In building a house, care should be taken to have as few windows opening towards the east as possible; better a blank wall in that direction if it can be managed; but very frequently it cannot, and catarrhs and other bronchial affections will be pretty sure to prevail in a house with an eastern aspect, unless it should be sheltered by a rising ground in that direction, or a belt of evergreen shrubs and trees; these, however, should not too closely surround the building, as they interfere with the free circulation of air, and so do mischief in another way.

Houses are often rendered unhealthy by a bad arrangement of the drains, and the necessary accommodations of the family; cesspools, into which the sullage from the sinks runs, should not be under any part of the building, or the noxious gases from it will be sure to escape, and mix with the air which is breathed. Many a child has fallen suddenly sick, many a father or mother been struck down by fever, for which no cause could be assigned, and could such mysterious visitations be traced to their true source, it would be found that the badly covered cesspool, the too-near-at-hand receptacle for refuse vegetable matter, or the ill-constructed water-closet, originated the mischief.

Let the air about, and through, a dwelling-house be kept as much as possible in motion, set the doors and windows open in warm weather, when strong winds are blowing, and in cold weather, too, when the inmates are out for a time, or sufficiently protected from chills by warm clothing, or sheltered in some other part of the building. Let the source of all unpleasant smells be at once sought out; the nose is quick to detect any foreign and unhealthy intruders into the pure atmosphere, and its warnings should ever be attended to. If bad smells cannot be got rid of by other means, disinfectants should be used; Chloride of Lime is perhaps the best, and most easily procured; buy a pound of any chemist, mix it with two gallons of water in a stone bottle, shake up, cork tight, and when wanted for use, pour off the clear liquor, and sprinkle it about the rooms and passages. See *Disinfectants*.

Air in Chapels, &c. The principles of ventilation are now getting to be so well understood, that few modern buildings intended for public assemblies, are without the necessary means and appliances for a constant and rapid change of the air within them; some, however, are still so constructed that the vitiated atmosphere can find no outlet, nor the fresh air an inlet, and into such no persons at all weak or delicate should venture; children especially should be kept out of them; and here let us enter our protest against the crowding a number of these into small school rooms, often the ordinary living rooms of common houses. It is scarcely to be expected that the young submitted to such evil influences, can grow up robust and hearty. A school room should have plenty of space above, and apertures for the foul air to escape; and even where there is the best of ventilation, the children should not be kept in it longer than two or three hours at a stretch. See *Ventilation*.

Change of Air. Upon this important branch of our present subject much might be said, and under the head of *Climate* (which see) more will be said. At present we may just remark, that change of air is at all times one of the most important auxiliaries of the medical adviser. To persons confined in close towns, accustomed to sedentary employments, and suffering from the ailments incidental to such situations, and modes of life, a change to some open hilly district, or the breezy sea-side, often produces marvellous results; so with the poor invalid, attacked, perchance by consumption, who finds the fresh breezes of the hills, or the sea-shore, too keen for

the diseased lungs to breathe, for such, in some sheltered vale of Devonshire, or other southern parts of our island, relief and enjoyment may be often found. In the low-lying, thickly wooded rural districts, the air is generally relaxing, and frequently laden with miasma; persons who are obliged to dwell there, should get out upon the open hills as often as possible, and let the lungs play freely in the bracing air; those engaged in rural occupations, are usually enabled to resist the enervating efforts of the bad air which they inhale, although not always, as we see by the prevalence of ague, and other fevers, among them. After all, however, for purity of air, the country is far to be preferred to the town, and in most situations, the rural population are more healthful than the urban.

As a general rule it may be noted that dry air is good, if not too dry; in which case it is likely to cause cracks and chaps in the skin, and to be loaded with minute particles of dust which are injurious to the lungs. Moist air is not healthy to breathe, especially if accompanied by cold, as it often is in this climate, hence the prevalence of pulmonary diseases. The air of the coast if not too keen, is undoubtedly stimulating and strengthening, in a great measure owing, probably, to its containing a portion of the marine constituents; there is a healthful freshness in the very play and dash of the waves, and the lungs seem to inhale larger quantities of the atmosphere, and to expand more freely, by the margin of the wide ocean; here that indispensable condition of atmospheric purity, constant motion, ever prevails, as it does usually upon great elevations, hill tops and lofty table-lands, around and over which the gales sweep, whistling, and swaying the boughs of the pines and other mountain trees, while, in the vale below, the heat is sultry, and not a leaf is stirred. Great contrasts are exhibited in the characters of the dwellers in these two different regions, and this is owing in a considerable degree to the influence of the air they breathe. See *Respiration*.

ALA (plural *Alæ*, Latin a wing); hence the anatomical terms—*Ala*, the upper part of the auricle (see *Auris*, *Ear*, *Pavilion*); *Alæ minores*, the *Nymphæ* (which see); *Alæ nasi*, the lateral or moveable parts of the nose (see *Nasi*); *Alæ respertilionum* (bat's-wings), the broad ligaments situated between the *Uterus* and *Fallopian tubes*, which see.

ALBICANTIA CORPORA (from the Latin *albico* to become white). Two small white substances in the *Cerebellum*, which see.

ALBINISM (from the Latin *albus* white). *Albinos* are those in whom the skins are of an uniform, dull, milky colour, the hair pale and silky, like bleached flax; the parts of the eye called the iris, retina, and chorioid, pink; the two latter, seen through the pupil, are of a lighter colour than the former. The sight of albinos is weak in the daylight, but stronger in the dark; they are found among negroes as well as the light-skinned races of mankind. The absence of colour is owing to a want of the pigmentary deposit under the cuticle. See *Leucopathia*.

ALBUMEN (from the Latin *albus*, white), One of the most familiar examples we have of this substance is the white of an egg, which is almost pure albumen. It enters largely into the constitution of all animal bodies, and also exists to a considerable extent in the vegetable kingdom. It coagulates by heat, so that its presence in the blood, urine, &c., may be easily detected. One reason why over-boiled eggs and over-cooked meat, &c., is unwholesome, is that the albumen, of which they are largely composed, becomes hard and indigestible. Chemical analysis shows that this substance contains a quantity of pure soda, and in some cases, as in the egg, this is mixed with sulphur, hence the discoloration of the silver spoon with which the egg is eaten. When coagulated by means of galvanism, the soda appears at the negative end of the battery. The Bichloride of Mercury, or Corrosive Sublimate, is a very delicate test of the presence of albumen; water which contains only a two-thousandth part becoming milky by this addition. In a fluid state it soon becomes putrid; but, in a solid state, will keep for a long time. Albumen has been distinguished, as, first, *ANIMAL*, which is *Incipient*, *Liquid* and *Solid*, the first being obtained from the serum of chyle, &c.; the second, being the thick glairy fluid which constitutes the white of an egg; and, the third, a substance contained in several of the tissues of the body. Second, **VEGETABLE**, as obtained from the gluten of wheat, &c. See *Gliadine*, *Glue*.

ALBUGINEA, meaning whitish, is a medical term coming from the same root as the above. *Albuginea oculi*, is the fibrous membrane immediately under the conjunctiva (See *Eye*); and *A. testis*, the fibrous tunica which envelopes the *Testis*, (which see;) and *Albugo* is a white opacity of the cornea. See *Eye*.

ALCOATES. Compounds of salts with alcohol. See *Hydrates*.

ALCOHOL is an Arabic term used by chemists to signify highly rectified or pure

spirit, such as Spirits of Wine; the term has also another meaning, viz., anything reduced into an impalpable powder; but it is now rarely used in this sense. Alcohol is generally prepared by fermenting saccharine substances, such as malt, and the process of converting the sugar into alcohol is called vinous fermentation. This process of conversion may be thus briefly described. The liquor containing the dissolved sugar is subjected to a heat of 150° and allowed to cool to 70°, yeast is then added; very shortly, an internal movement in the fluid takes place, a thick scum forms on the surface, and a gaseous matter escapes, which is carbonic acid gas; the hydrogen in the fluid then unites with a portion of the carbon, and forms olefiant gas, which uniting with the water (oxygen and hydrogen) composes alcohol, and this, from its superior lightness passes over and is condensed, in combination with watery vapour, in a cooled receiver. To deprive alcohol of its water, it is passed through dried Carbonate of Potash, Chloride of Calcium, Lime, Barytes, or Alumina; or it may be done by putting it in an open vessel under the exhausted receiver of an air pump, previously placed in a vessel containing Lime.

Pure alcohol is a transparent, colourless fluid, of a pungent taste and fragrant odour; it is lighter and more volatile than water, burns with a blue flame which becomes yellowish when the spirit is diluted with water, when mixed with an equal bulk of which, it is termed Proof Spirit, it then has a specific gravity of 0.917, and this is not quite so strong as that used for many tinctures and other pharmaceutical purposes, the strength of which is represented by 0.930, the gravity of pure alcohol being, according to Lowitz, 0.796, although the Leyden college make it 0.815. The pure spirit of commerce is seldom less than from 0.830 to 0.835.

Alcohol is the active principle of all intoxicating drinks, the habitual use of which, according to Dr. Paris, induces "more than half of all our chronic diseases." Brandy, Rum, Gin, Whisky, &c., are but variously flavoured forms of diluted alcohol; medicinally they are sometimes prescribed, and employed with good effect; brandy has been found especially useful to rouse the system in some cases of extreme debility, and in the sinking stages of typhus fever, &c. They are sometimes recommended as nervous stimulants in cases of great depression, but there is always danger that the taking of them may become a confirmed habit, which will grow upon the patient, and eventually make a wreck of mind and body. See *Drunkenness*.

That alcohol is a poison there can be no doubt, we see too much of its baleful effects in our everyday life and experience, to question this; yet like most other poisons it may be turned to good account in the treatment of disease, as we have already shown, and in a greatly diluted form, may be beneficially employed as an article of diet. See *Ale, Beer, Beverages*.

With every desire to avoid taking sides in the great temperance dispute which has so long agitated the public mind, we may observe that the *abuse* of a thing furnishes no argument against its *use*, and that we have no right to deny to some the pleasure and benefit which they derive from the *moderate* employment of alcoholic drinks, because very many involve themselves in disastrous consequences from taking them *immoderately*.

Besides the internal administration of alcohol, it is much used in evaporating and other *Lotions*, in *Gargles*, and *Collyria*, (which see). It forms the basis of all the *Tinctures* and medicated *Spirits* (which see) and in its several pharmaceutical forms of Rectified, Proof Spirit, and Spirit of French Wine, is in constant request both commercially and medicinally.

As a poison; when taken in large doses either as Spirits of Wine, or any of the ardent spirits, such as Brandy, Gin, &c., exhibiting all the effects which we see in the various stages of inebriety; these are followed by total insensibility, coma, and death; if the system can be relieved in time of the poison, by means of the stomach pump or an emetic, the life of the patient may be saved. The best restoratives are ammonia given in the form of the Aromatic Spirit, and strong Coffee, as in case of poisoning by Opium which see, also *Fermentation, Poisons, Spirits*.

ALE AND BEER. These are fermented liquors, which are, or ought to be, made wholly of malt and hops; obtaining from the former their saccharine and alcohol (sweetness and strength), and from the latter their bitter or tonic principles. The above terms are both of Saxon origin, and it was to the Saxons, probably, that we owe the introduction of these drinks into this country. Pliny says, "All the nations of Western Europe have a liquor with which they intoxicate themselves, made of corn and water." Unfortunately, to the present day this practice of intoxication, by means of malt liquor, very much prevails, among the poorer classes especially, to whom, instead of a gentle stimulant and strengthening diet-drink, ale, beer, or porter, as the

case may be, is, by excessive indulgence in it, made a moral and physical poison.

According to law, "Malt Liquors," as these beverages are called, may be brewed only from malt and hops, with sugar and water; isinglass to refine them is allowed, but no other addition, although others are often made, not so much, it is said, by the large brewers, as by the licensed retailers. The fact elicited by a recent parliamentary commission, that the publican sells his beer at the same price as he pays for it, if not lower, is sufficient to prove that considerable adulteration takes place. The following appears to be about the process:—First water is added, and this makes the beer taste poor; it is deficient in body, and also in strength, and no regular beer drinkers would take it; to remedy this the brewer's druggist is called in, and he prescribes treacle and liquorice, to give body and sweetness, and *Cocculus indicus*, a stupefying narcotic seed, to make up for the deficiency of alcohol. A little Sulphate of Iron, or Green Vitriol, commonly called Copperas, is then added to make it froth up well; and to impart bitterness, quassia is used: the beverage is now completed. Much has been said lately about the employment of Strichnine, the active principle of *Nux Vomica*, and a virulent poison, to give a bitter flavour to ale and beer; but the expense of this preparation would seem to put it altogether out of the question. Ales, it is obvious, on account of the lightness of their tints, must be less liable to be tampered with than the darker coloured fluids. The *brewing* of malt liquors is conducted upon certain fixed principles, which are modified according to the kind of beverage to be produced. See *Brewing*.

The colour of ale and beer depends very much upon that of the malt employed in its preparation, and this is in accordance with the heat to which the grain is subjected. In the paler malt the saccharine matter is in the greatest perfection; hence the pale ales are the best. *Strong Ale* is made of from eight to ten bushels of malt, and from eight to ten pounds of hops to the hogshead. For *Bitter Ale* very pale malt is used, and not above half the above quantity; and for *Table Ale*, or beer, about the same proportion of malt, with from four to nine pounds of hops, unless it is prepared from the second mash of stronger ales. Very *Small*, or *Harvest Beer*, may be brewed of from two to three bushels of malt and four pounds of hops to the hogshead; but this is for immediate use, as it will not keep. *Stout* has about one quarter of pale malt, two bushels

of brown, and three-quarters of a bushel of black, or patent malt, with eight pounds of hops to the hogshead; and *Porter* is often much the same, with treacle or liquorice.

ALEXIPHARMICS (from the Greek *alexo*, to repel, and *pharmakon*, poison). An old name for antidotes for poison: from the same root we have also *Alexiterics*, preservatives against infections or poison.

ALGÆ, the sea-weed tribe of Acotyledonous plants, belonging to the order *Aphyllæ*, from some of which medicines are prepared. See *Iodine*, *Iodide of Potassium*, &c.

ALGEDO (from the Greek *algos*, pain), inflammation of the neck of the bladder, occurring in *Gonorrhœa* (which see). This is a term now seldom used.

ALGOR (from the Latin *algo*, to be cold). A sudden chilliness, or rigor, which seizes on the patient in some stages of *Fever*, *Cramp*, *Cholera*, which see.

ALGORATH, POWDER OF. A Protoxide of Antimony, so called after a physician of Verona, with whom it was a favourite nostrum. See *Antimony*.

ALIENATION (from the Latin *alieno*, to estrange). Mental derangement. See *Madness*.

ALIMENT (Latin *Alimentum*), nourishment, nutrition. Anything necessary for the support of life. See *Diet*, *Food*.

ALIMENTARY CANAL. This is what anatomists would call a musculo-membraneous tube, extending from the mouth to the anus, and including many of the most important organs and viscera of our internal economy. It has been divided for convenience of description and reference into the following distinct parts—the *Mouth*; *Pharynx*; *Æsophagus*, and *Stomach*; the small Intestines called *Duodenum*, *Jegunum*, and *Ilium*; and the large Intestines, termed *Cæcum*, *Colon*, and *Rectum*, all of which see.

Into this canal the food passes after it has reached the back of the throat, and is conveyed by a regular undulatory motion, given by the action of the æsophagus, or muscular gullet. When this motion is interrupted by an attempt to swallow too fast, the action becomes spasmodic, and a sensation of choking is produced: at the upper and larger end of the stomach, the food taken at one time is collected, and mixed with gastric juice, becoming converted into a greyish-looking pulp, called *chyme*, which, as it is formed, is passed by another wave-like motion towards the pylorus, or smaller end of the stomach. Here there is a valve which allows all well-digested food to pass, but rejects or turns back that which is not sufficiently softened.

When the food has passed through the pylorus into the small intestines, the bile, flowing into the duodenum from the liver, mixes with it, as does also the pancreatic juice. The chyme, thus rendered more fit for the purposes of nutriment, passes onward through the small intestines, giving its *chyle*, or nutrient quality, to the lacteals. The folds and convolutions into which the intestines are thrown, are clearly for the purpose of exposing a large surface to the action of the chyme, which having traversed the small, is discharged into the large intestine, or colon, through a slit-like valve, assuming there the feculent character. In the colon the food yields up the remains of its nutrition, and is discharged through the rectum and anus. It should be borne in mind that this alimentary canal, is not only the main passage through which the food passes, but it is also the principal drain or sewer of the body; into this is cast a large proportion of the waste material which it would be injurious to retain, especially in illness; hence the necessity for keeping the passage clear by means of aperient medicines, when the bowels do not act without, even when little or no food is taken. See *Abdomen*, *Absorption*, *Digestion*.

ALKALI (from the Arabic *al*, from, *kali*, the name of a plant). The plants so called are chiefly those of marine origin, from the ashes of which, when burnt, Potash or Soda, termed fixed alkalies, can be extracted; to these two, and the volatile alkali, Ammonia, the name was formerly restricted; now, however, all caustic substances which can be volatilized by heat, and have the power of neutralizing acids, are termed alkalies; they have the property of changing vegetable blue to green, red to purple, and give to yellow a reddish brown tinge. They are largely employed in medical practice, and form a class of themselves, having very distinct peculiarities. Alkalies are of three kinds, viz.:—1. The vegetable, as *Potash*; 2. The mineral, as *Soda*; 3. The animal, as *Ammonia*, which is also distinguished as volatile alkali, being made by distillation from the horns of deer, and other animal matter. See *Ammonia*, *Potash*, *Soda*.

From the same root come also the words *Alkalinity*, the property of turning vegetable blues and other colours as indicated above; *Alkalimeter*, an instrument for ascertaining the quantity of alkali in any substance; and *Alkalescent*, growing alkaline or ammoniacal, commonly applied to urine.

ALKALINE EARTHS are those which possess alkaline properties, as *Magnesia*, *Lime*, *Baryta*, and *Trontia*, which see.

ALKALIZATION, the impregnation of any substance with an alkali.

ALKALOIDS (from *alkali*, and Greek *eidos*, species), are the active principles of various vegetables which have alkaline properties; their discovery may be dated from 1816, and their introduction into medical practice has proved of immense service to the physician, as their great activity admits of their administration, with absolute certainty of effect, in very minute doses. *Quinine*, the active principle of bark, and *Morphine*, that of opium, are the commonest examples of alkaloids which can be cited at present. We shall have occasion to refer to all these preparations as we proceed.

ALKE-KENGE, Winter Cherry, the fruit of the (*Physalis Alke-kenge*), sometimes but not often, used in *Nephritis*, *Dysuria*, *Ascitus*, &c., which see.

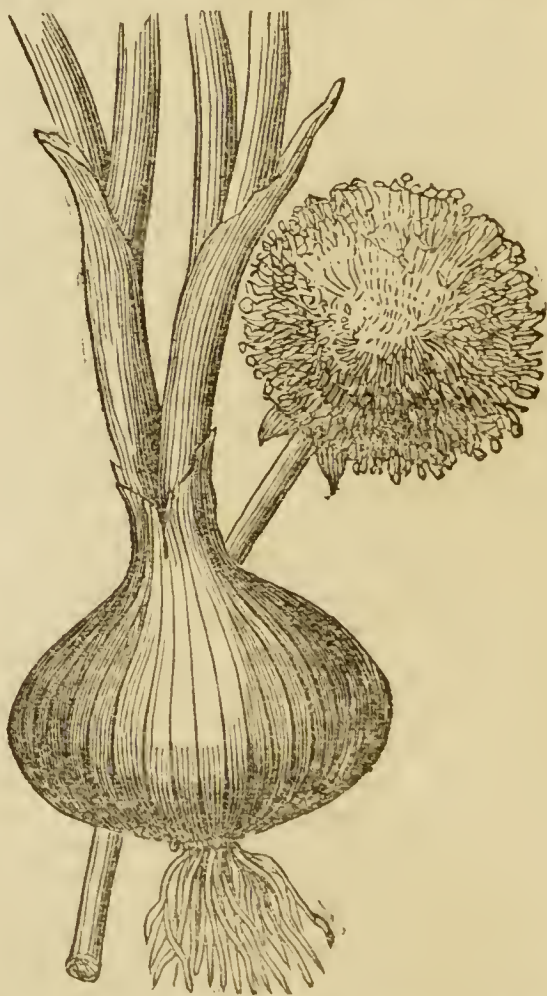


ALLANTOIS (from the Greek *allas*, a sausage, and *eidos*, likeness). A thin transparent membrane, situate between the *Amnion* and *Chorion*, which see. Also a vesicle, or sac, projecting at the lower end of the alimentary canal, in the embryo.

ALLIUM (from the Latin *aleo*, to stink). A genus of plants belonging to the natural order *Asphodelleæ*, of which we have familiar examples in the common Garlic (*A. Sativum*), the Onion (*A. Cepa*), the leek (*A. Porrum*), and the Shallot, (*A. Ascalonicum*). The properties of all these are stimulant, diuretic, expectorant, and deobstruent, but they are not suitable for hot and bilious temperaments, and are not often prescribed. They have been found useful in chronic catarrhs, humoral asthma, and worms; epilepsy and

dropsy are said to have been cured by a strong infusion of garlic, which, as well as onions, is sometimes used as a revulsive; the latter, roasted and split, are frequently applied as cataplasms to bring abscesses to maturity. Of garlic, a dose or two may be taken in the morning for worms: of the infusion of garlic, made of half a pound of the bruised roots to a pint of boiling water, two teaspoonfuls before and after every meal, for *epilepsy*: of the syrup of garlic, made of 1 ounce of the expressed juice, to 1½ ounce of lump sugar; a teaspoonful occasionally to children, for *coughs* without inflammation; of the milk of garlic, 2 drachms of the bruised bulbs boiled in 6 or 8 ounces of milk, useful as an enema for children in *thread worms*. Wine of garlic, three or four bulbs bruised and macerated in a quart of proof spirits, is a good stimulant lotion, recommended for *baldness of the head*, all of which see.

Besides the species above named the Chive and the Rocambole are used for flavoring soups, and other culinary purposes.



None of the Allium family are thought to possess deleterious qualities; they are too heating for some constitutions. The generic term *allium* is said by some to be derived

from the Celtic *all*, hot or burning. We give a cut of the *onion* and *leek*.



ALLOPATHY. A term used in contradistinction to Homœopathy, and generally applied to the practice of all medical practitioners who do not belong to the latter school. As a general principle, it may be stated that the allopathists contend that all diseases are to be cured or alleviated by medicines which produce their opposite condition, this being the recognised principle of action from the first foundation of medical science; while the disciples of Hahnemann contend for minute doses of the medicines which are capable of exciting in healthy persons symptoms similar to those of the diseases to be cured. See *Homœopathy*. Perhaps, in common fairness, the above term ought to be construed as meaning, the treatment of diseases with a view to effect a cure by some means *different* from the causes which produced them; for the true skilful practitioner, in his combats with disease, will avail himself of all the weapons which the armoury of science furnishes, and not be restricted in his operations by the narrow rules of this or that party. See *Medical Practice, Pharmacy, Physician*.

ALLSPICE (*Pimento*). The unripe berries

of the *Eugenia Pimenta*, an evergreen West Indian tree; they have a strong spicy taste, an aromatic odour, and contain a volatile oil, which is useful as a diffusible stimulant and stomachic, the dose being from 1 to 3 minims; this is the *Oleum Pimentæ* of the



Pharmacopœias: there is also Allspice Water (*Aqua Pimentæ*), used chiefly as a vehicle for other remedies: Spirits of Allspice (*Spiritus Pimentæ*), dose 1 to 2 drachms, and *Tinctura Pimentæ*, dose 10 to 12 drops. Of the Powder (*Pulvis Pimentæ*), from 10 to 40 grains may be taken; it is useful in chronic diarrhœa, combined with opium, chalk, and cinnamon. We give above a cut of the Allspice Tree.

ALMOND (Latin *Amygdalus*). The almonds are a tribe of dicotyledonous plants, with the sweet and bitter kernels of whose fruit we are all sufficiently familiar; the *Amygdalis Amara* and the *A. Dulcis* appear to be but varieties of the *A. Communis*, (see cut on next page); the *A. Persica*, or Peach, formerly called the Persian Apple, is another member of the family, whose kernels, like the above-named bitter variety, contain a peculiar principle called *Amygdaline*, from which Hydrocyanic Acid, and a volatile oil are produced, both very poisonous.

The Essential Oil of Bitter Almonds (*Oleum Amygdalæ amaræ*), is much used for flavouring custards, &c.; but great cau-

ion is necessary in its employment, on account of its poisonous nature. The same may be said of the *Aquæ* (Water) *Amygdala amaræ*, and of a weaker kind, sold under the name of Black Cherry Water, and also Peach, or Laurel Water. The leaves, as well as the kernels of the Peach, and most other trees of the tribe, have this poisonous property. See *Prussic Acid*, and *Acids*.

Sweet Almonds are emollient and demulcent, and an emulsion prepared from them is useful in bronchial diseases, in dysentery, and several affections of the urinary organs, frequently lessening the acrimony of the secretions in quite a remarkable manner. The pharmaceutical preparations are—Confection, Emulsion, Milk, Mixture, and Oil of Almonds. The first of these, is used chiefly to prepare the second, which is a very agreeable and elegant preparation;



the third is seldom taken alone, but is a good vehicle for Nitrate of Potash, Opium, Squills, &c.; the fourth is but another name for the third; and the fifth is used for a variety of commercial as well as medical purposes; it is a very pure and pleasant oil to take, and recommended as a substitute for Cod-liver Oil. See *Oils*.

ALOE (Greck *aloe*). The aloes are a genus of succulent plants belonging to the natural order *Liliaceæ*, the juice flowing from which

is a resinous substance of an extremely bitter and aromatic taste; a full dose operating slowly, though certainly, as a stimulant cathartic, acting chiefly on the lower bowels: in small doses it is stomachic and tonic. Aloes are ranked among the *Emmenagogues* (which see), and are useful as a remedy for



the sluggish bowels to which persons of sedentary habits are particularly liable, a 5 grain pill every other night at bed time, will generally be found sufficient. In *dyspepsia*, *hypochondriasis*, and *jaundice* aloes may be given with advantage, they have a stimulating action on the rectum, and also on the uterus, therefore must not be prescribed when there is a tendency to piles, nor during pregnancy; on account of their extreme bitterness, pills are the best form of administration; if a liquid form is adopted, they should be combined with liquorice and bitter tonics, which increase their purgative powers. There are three kinds of Aloes commonly kept by Druggists, viz., Socotrine or Cape, Barbadoes, and Hepatic; the former is the best for medicinal purposes, the two latter being too drastic in their operations; they are more generally used by the veterinary surgeon. The following are the chief pharmaceutical formulas into the composition which aloes enter.—*Extract of Aloes*, dose 1 to 5 grains; *Compound Decoction of Aloes*, $\frac{1}{2}$ an ounce to 2 ounces, a mild cathartic, and anti-acid; *Enema of Aloes*, employed in dislodging

worms from the rectum; *Compound Powder of Aloes*, dose 10 to 20 grains, as a cathartic and sudorific, having in it a proportion of Gum Guaiacum and Cinnamon Powder; there is also a *Powder of Aloes with Cannella*, formerly much used as an aperient, under the name of *Hiera Picra*, it is not found in the late Pharmacopœias. There is, also, a *Tincture of Aloes*, simple and compound, the dose of the former being from $\frac{1}{2}$ a dram to $\frac{1}{2}$ an ounce, and of the latter, from 1 to 2 drachms; and *Wine of Aloes*, given as a stomachic and purgative; in the former case from 1 to 2 drachms, and in the latter from 1 to 2 ounces. Besides these there are several aloetic preparations, not commonly used or recognized by the London or other colleges, and *Aloin*, which is the active principle of Aloes. See *Aperients*, *Cathartics*, &c.

ALOPINA (from the Greek *alopex*, a fox). A falling off of the hair. See *Baldness*.

ALPHITRI (plural of the Greek *Alphitris*, farina), a scientific name for *barley-meal*, which see.

ALPHONSIA. An instrument for extracting balls, invented by Alphonso Ferrier, of Naples; now nearly superseded by later inventions.

ALPHOS (Greek for white). A synonym for the *Lepra Alphoides*, or White Lepra. See *Leprosy*.

ALTHÆA (Marsh Mallow). This is the *Althæa Officinalis* of botanists, a plant of the

natural order *Malvaceæ*, common enough in English marshes.

It has emollient and demulcent properties, which render it useful in inflammations and irritations of the alimentary canal, as well as of the urinary and respiratory organs: about 4 ounces of the dried root, with 2 ounces of raisins, freed from their seeds, put into 5 pints of water, and boiled down to 3 pints, is a good form of administration; half a wineglassful of the clear liquor may be taken frequently to allay cough and irritation; this is the *Mistura Althææ* of the Edinburgh Pharmacopœia; the *Syrupus Althææ* is prepared by boiling 8 ounces of the fresh root, sliced, in 4 pints of water, to which is afterwards added 2½ lbs. of lump sugar; this is a good demulcent; dose, half an ounce to 1 ounce. The Ointment of Marsh-Mallows (*Unguentum Althææ*) was a favourite healing application formerly, and is still often used. There is also a *Pasta* (paste) *Althææ*, and several other preparations of Mallows, enemas, lotions, &c. The leaves and flowers of both the Marsh and Common Mallow (*Malva Sylvestris*—see cut) as well as the root, have demulcent



properties, but they are chiefly used externally for soothing *fomentations*, which see; also *demulcents*.

ALTERATIVES (from the Latin *altero*, to change). A class of medicines whose object it is to effect a gradual change in the state and condition of the functions, secretions, &c., and establish the healthy habit which has somehow become deranged.

An alterative medicine, then, is supposed to be one which produces a new effect, and thus *alters* or diverts the attention of the system, if we may so speak, from the original disease; it is generally directed, or intended to act, upon the immediate seat of mischief, as the liver, the blood, &c. Small doses and frequent is the general rule with regard to the administration of alteratives, and in this way some of our most active and even poisonous drugs are employed to produce very beneficial results. It is properly through the medium of the excretions and secretions that alteratives act; they are taken from all classes of medicines, mineral as well as vegetable; thus, Mercury and Ipecacuanha, the former commonly combined with Chalk, as in the *Hydrargyri cum Creta* of the Pharmacopœia, and the latter with Opium and an alkali, as in the *Pulvis Ipecac. Comp.*, or Dover's powders, both of which see.

ALUMINA (Alum). The earth of Alum, or *Argil* (which see), forms the bases of clays and boles. The crystalized alum of commerce is a Sulphate of Alumina and Potash, or an Acetate of Alumina; it is very astringent, and is chiefly prescribed in diarrhœa and dysentery, especially when affecting children, to whom it may be given in doses of 10 grains or more, in mucilage, three times a day. It is sometimes, though rarely, given in hæmoptysis (which see), is used in injections and gargles, and lotions for foul ulcers. It enters into the composition of most of the powders or pastes used by bird stuffers and other preservers of animal specimens, being valued for its detergent and antiseptic qualities. Ground alum is largely employed by bakers. See *Adulteration, Bread*.

In the London Pharmacopœia will be found *Liquor Aluminis Compositus*, a powerful astringent lotion; and in that of Edinburgh, *Pulvis Aluminis Compositus*, recommended for chronic diarrhœa and hæmorrhages from the stomach and bowels, dose 10 to 40 grains. There is also a *Tannate of Alumina* recommended by some for injections. See *Astringents*.

ALVFARIUM (from the Latin *alvearis*, a bee-hive). The meatus externus of the *Ear*, which see.

ALVEOLI (from the Latin *alvei*, channels). The meaning of *alveolar*, is, full of sockets or pits, like a honeycomb; hence the term

alveolar processes has been applied to the sockets of the *teeth*, which see. By the above term is also sometimes understood the arteries and veins of these sockets.

ALVUS (Latin, the intestines), applied to intestinal evacuations; hence, also, *alvi-fluxus* (from *fluo* to flow) diarrhœa; and *alvine concretions*, calculi found in the *stomach* or *intestines*, which see.

ALYSMUS (Greek *alysmos*, from *alvo*, to be vexed). A term formerly used to denote anxiety or restlessness, chiefly affecting the præcordia, and accompanied by lowness of spirits.

ALYSSUM (The Madwort Plantain); botanical name *Alyssa Plantago*. In America said to be a specific for the bite of the rattlesnake. In Europe, the north especially, a



popular remedy for canine madness. The powdered root is spread upon bread and butter, and so eaten: two or three doses are said to have cured the worst cases, and even the dogs themselves.

AMADOU. An inflammable substance used for tinder or touchwood; prepared from a dried plant, the *Boletus Igniarius*. See *Agaric*.

AMALGAM (from the Greek *ama* together, and *gameo* to marry). A mixture of two metals, one of which is always mercury; whereas, an *alloy* (which see) may be composed of any two metals. There is but one amalgam found in a natural state, which mineralogists call *native*, and that is of silver and mercury. Amalgams are of great use in chemical manipulations, and in various

branches of the fine arts, gilding, refining, &c.; they are either liquid, soft, or hard; dependant, in some cases, upon the quantity of mercury employed, in others upon the nature of the metals amalgamated; they are generally white; all crystallizable; some are decomposed by mere exposure to the air, and all may be so by the application of a red heat, which drives off the mercury, and leaves the more fixed metals. The amalgam employed for exciting electricity in the machine, is composed of tin and zinc in combination with mercury. See *Electricity*.

AMANITINE (from *amanite*, a mushroom), the poisonous principle of several of the fungi.

AMARA (from the Latin *amarus* bitter). See *Bitters*, *Bitter Almonds*.

AMATORII PATHETICI (from the Latin *amo*, to love, and Greek *pathos*, passion). A term applied to the superior oblique muscles of the eye, which see.

AMAUROSIS (from the Greek *amauros*, obscure). Loss of sight, proceeding from a paralysis of the optic nerve, which may be caused by disease of the nerve itself, or of that part of the brain with which it comes in contact. Amaurosis, generally comes on very gradually, with dimness of vision, and variations of colour, or floating objects, called *spectra* (which see). One symptom is dilation of the pupil and insensibility to light. This disease may be permanent or temporary, as it depends upon causes which are remedial or otherwise; it sometimes is occasioned by an excess of bile in the system, or a disordered stomach; and, in that case, resort would be first had to aperients and mercurials, such as a 5 grain Blue Pill at night, and a Senna, or as it is commonly called a Black-draught, in the morning, to be followed up by small doses of Calomel and Rhubarb, or Colocynth, according as the bowels are sluggish or otherwise. If the patient is strong, and of a full habit, he should keep to low diet and avoid malt liquor or spirits. Should the symptoms not yield to this treatment, blisters should be applied behind the ears, or a seton opened in the back of the neck or temple, as the fair presumption is that the mischief lies in the brain, or the nerve itself. See *Eye*.

AMBE (Greek *ambe*, the edge of a roek). An old machine for reducing *dislocations*, which see.

AMBER (*Succinum*). A vegetable substance composed of a peculiar oil (*Oleum Succini*), an acid, (*Acidum Succinicum*), and resin. It is generally in small pieces, varying in colour from a light yellow, or nearly white, to a deep brown; it is hard, brittle,

and most commonly translucent, takes a good polish, and, when rubbed, becomes electrical; indeed, from its Greek name *elektron*, is derived our word electricity. When bruised it exhales an aromatic odour, and when heated to 448° Fahrenheit, melts, and bursts into a bright flame; it is soluble in sulphuric and nitric acid, but is not acted on by water, and only gives out a portion of its resin to spirit.

The powder of amber is sometimes used in fumigations; the oil is given as an antispasmodic in doses of from 5 to 10 minims on lump sugar, or in mucilage; and externally it is a stimulant and rubefacient, and therefore forms an ingredient in liniments and embrocations for rheumatism and paralysis. The active principle of *Roches' Embrocation*, so efficacious in whooping-cough, is Oil of Amber; acted on by strong nitric acid, this oil produces artificial musk; and the original *Eau-de-Luce* contained a portion of it. The Acid of Amber is sometimes given as an antispasmodic, dose 5 to 8 grains. See *Spasms*.

AMBERGRIS (French *Ambre-gris*). A fatty substance found floating on the sea in warm climates, supposed to be a concretion formed in the stomach of the Spermaceti Whale; it is solid, opaque, of a bright grey colour, with minute lines of red and yellow. It is used chiefly as a perfume in the form of an essence or alcoholic solution; when heated with boiling spirit, until it is saturated, a peculiarly brilliant and white substance is produced, called *Ambergrin*.

AMBLYOPIA (from the Greek *amblos*, dull, and *aphe*, touch). Insensibility to touch or general feeling.

AMBLOSIS (from the Greek *ambloo*), to cause abortion. See *Miscarriage*.

AMBULANCE (from the Latin *ambulo* to walk). A light caravan, furnished with surgeons' assistants and orderlies for attending the wounded on the battle field.

During the disastrous Crimean war, the readers of the illustrated papers had frequent opportunities of realizing the utility of these moveable field hospitals; several new ambulances were at that time invented and constructed, both by the English and French, some of them very complete in their arrangements and appointments, and the poor wounded soldiers had often cause to bless the humanity which planned, and the mechanical skill which constructed, these carriages for conveying their mutilated and agonized bodies to the more permanent hospital, where the gentle hand and the womanly heart of a Nightingale, that true "Sister of Mercy," waited to alleviate their sufferings.

AMBLYOPIA (from the Greek *amblos* dull, and *ops* the eye). Incomplete or incipient *amaurosis*, which see; and *sight*.

AMBON (from the Greek *anabaino*, to ascend), the margin of the sockets in which the heads of the large bones are lodged.

AMENORRHŒA (Greek *a not, men* a mouth, *rheo* to flow), morbid deficiency of the *Catamenia*, which see, also *Menstruration*.

AMENTIA (from the Greek *amens*, senseless). Imbecility of intellect. See *Idiocy*.

AMER (Greek, bitter). The bitter principle produced from silk by digesting it in nitric acid.

AMIANTHUS (Greek *a not, and mianio* to pollute). A mineral substance, consisting of delicate and regular fibres, perfectly incombustible, like *asbestos*, which see.

AMIDINE, OR AMYLINE (from the Greek *amidin* starch). A substance obtained by a solution of starch in water, and intermediate in its nature between gum and *starch*, which see. It is sometimes used for stiffening *bandages*, which see.

AMMONIA. A volatile alkali formed by the union of azote and hydrogen, most commonly seen under the form of *carbonate* and *subcarbonate*, the Volatile Salts of commerce, much used by confectioners to give lightness to their pastry by its free evolution of carbonic acid gas when subjected to heat. Its medical properties are absorbent, anti-acid, stimulant, diaphoretic, and anti-spasmodic; in large doses, emetic. It is given in convulsive disorders, gouty acidities of the stomach, nervous affections, debility, the flatulency and acidity arising from dyspepsia, and the gastric affections which result from habits of intemperance and debauchery. Combined with opium, it is good in chronic diarrhœa, and, in large doses, in the muscular relaxation of long standing rheumatism; in hoarseness or a relaxed state of the throat and bronchial organs. It has been strongly recommended in *typhus fever* (which see); its use as a stimulant and restorative in *syncope* and *hysteria* (which see) in the form of Smelling Salts is well known. The dose of the Carbonate of Ammonia is from 5 grains to a scruple in Bitter Infusion, Camphor Mixture, or any convenient vehicle; the officinal preparations into which it enters are:—*Liquor of Subcarbonate of Ammonia*, dose, 20 minims to 1½ drachms; *Liquor of Acetate of Ammonia*, 2 to 6 drachms; *Ammoniated Copper*, ½ to 5 grains; *Liniment of the Subcarbonate of Ammonia*, for external use only. The second of these is a febrifuge and diaphoretic, often prescribed in combination with other medicines of its class. It

is also a good application for bites and stings, and inflammatory eruptions.

The Aromatic and Fœtid Spirits of Ammonia (*Spiritus Ammoniac Aromaticus et Fœtidus*) of the Pharmacopœia, are both much used as nervous stimulants and antispasmodics, dose, ½ a drachm to a drachm in Water or Camphor Mixture; they are valuable additions to tonic mixtures, the former, especially, for lowness of spirits, and the latter where there is flatulency. The *Strong Liquor of Ammonia* is too caustic for internal administration, but is sometimes given, as is also the common Hartshorn (*Liq. Volatile Cornu Cervi*) in hysteria, &c. Most usually and properly, however, these preparations are employed for external application only; their pungent vapour is applied to the nostrils of fainting persons, and they are mixed with oleaginous and other substances for liniments to produce counter irritation. See *Liniments*.

The Compound Tincture of Ammonia (*Tinctura Ammoniac Compositus*) is composed of gum mastic, oil of lavender, rectified spirit, and strong solution of ammonia: this is the old *Eau de Luce* with the Oil of Amber omitted; it is a good stimulant and antispasmodic, dose, from 5 to 10 minims in water. There are several other ammoniated tinctures in the Pharmacopœia, such as Castor, Colehieu, Guaicum, Opium, and Valerian, see *Tinctures*; and various other officinal preparations into the composition of which ammonia enters, such as Ammoniated Iron (see *Iron*), Ammonio-chloride of Mercury; (see *Mercury, White Precipitate*.) Acetate, Citrate, and Tartrate of Ammonia; these neutral salts are all used as diaphoretics, are given in febrile diseases, and in *Dropsy* and *Rheumatism*, which see. The Acetate as well as the Carbonate and Pure Ammonia, are sometimes taken by drunken persons to recover them from the effects of their potations; the former is now only given in the form of *Liquor Ammoniac Acetatis*, already spoken of: the popular name of this was formerly *Spirit of Mindererus*.

The other ammoniacal salts employed in medicine are—the Nitrate, Nitro-sulphate, Phosphate, Sulphate, Hydro-sulphuret, and Succinate of Ammonia; the first is refrigerent and diaphoretic, dose, from 3 to 20 grains; equal parts of this and Carbonate of Soda forms a powerful freezing mixture (see *refrigerent*); the second is given in typhoid fevers, dose, about 12 grains; the third is good in some cases of rheumatism, dose, 3 to 10 grains; the fourth is diuretic, stimulant, and resolvent, dose, 15 to 30 grains;

the fifth is poisonous in large doses; in small, say from 4 to 8 drops, it is good in catarrhal complaints, diabetes, and gout; the sixth is antispasmodic, it is usually given in the form of *Liquor Ammonia Succinatus*, dose, from 5 to 10 drops. The Hydrochlorate, or Muriate of Ammonia, is an article much used by braziers and some other workers in the useful arts, under the name of *Sal Ammoniac*; it is given in inflammation of the mucous membrane, when the more active stage has passed, and in chronic bronchitis; also in intermittent fever, and chronic enlargement of the prostate, dose, from 5 to 20 grains every three or four hours; its action requires to be carefully watched in persons of feeble constitutions, and those subject to hæmorrhages. It makes a good lotion for indolent tumours and chilblains, mixed with Nitrate of Potash, or Saltpetre, is powerfully refrigerent, and may be employed with advantage in *Gargles*, which see.

AMMONIUM. The supposed metallic base of ammonia.

AMMONIACUM. Commonly called *Gum Ammoniac*, a resinous gum which exudes from the *Dorema Ammoniacum*, called by the Persians *Oshac*, a plant of the natural order *Umbelliferæ*. It is commonly found in little irregular fragments called tears or drops (*Guttæ Ammoniaci*) of a pale yellow colour on the surface, but white within; of a bitter flavour, and faint but not unpleasant smell. Sometimes it is in larger lumps, and is then called *Lapis Ammoniaci*,—this is its more impure state, in which it is often adulterated with resin.

This gum is stimulant, antispasmodic, and expectorant; in large doses gently purgative, and sometimes diuretic; it is useful in asthma, hooping-cough, visceral obstructions, and in some stages of phthisis, and in mesenteric obstructions, after the exhibition of gentle aperients. Dissolved in nitric acid, it is given with great advantage to promote expectoration, where large accumulations of phlegm are present; while externally it is useful as a discutient and resolvent in scirrhus tumours and indolent ulcers. Its chief officinal compounds are Mixture of Ammoniacum; dose, $\frac{1}{2}$ to 1 ounce; Compound Squill Pill, 10 grains to 1 scruple; Plaister of Ammoniacum with Quicksilver, and Gum Plaister. Rubbed down with cold water, which would seem to be its proper solvent, it makes a milky fluid, and if to a pint of this be added the yolk of an egg, with 2 drachms of Tincture of Squills, and half an ounce of Syrup of Poppies, and the same of Paregoric Elixir, it makes an excellent cough mixture. See *Asthma, Coughs, &c.*

AMMONITA or **CORNU AMMONIS.** A part of the brain, otherwise called the *Pes-hypocampi*, which see, and *Brain*.

AMNESIA (from the Greek *a not*, and *mnesos* memory). Forgetfulness; loss of memory, which see.

AMNIUM (from the Greek *amnus* a lamb). The internal membrane of the *ovum* (which see) being that which immediately surrounds the *fœtus* (which see). The *Amnic Liquor* is the fluid contained in this membrane; and a weak acid discovered in the *Liquor Amnic* of the cow, has been called *Amniatic Acid*. See *Childbirth, Womb*.

AMOMUM. A genus of plants bearing aromatic seeds, several of which are used medicinally. See *Cardamums, Ginger, Turmeric, and Zedoary*.

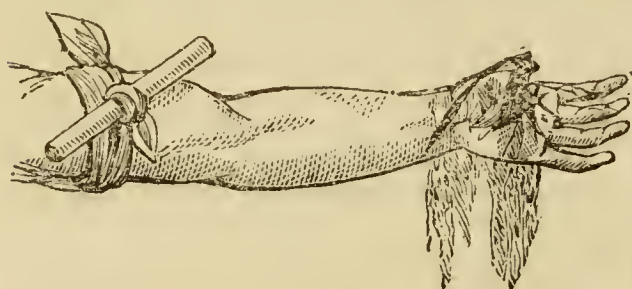
AMORPHOUS (from the Greek *a not*, and *morphe* form). Shapeless, irregular, rude, rough, applied to inorganic substances in their natural state.

AMPHI (Greek, signifying both). Its compounds are *amphiarthrosis* (arthrosis, articulation), a mixed kind of articulation, (which see). *Amphibia* (*phios*, life,) animals which can live both on land and in water. *Amphimerina* (*emera*, a day,) a term applied to a quotidian or daily ague.

AMPHORIC RESONANCE (from the Latin *amphora*, a vessel). A sound in the chest like that produced by blowing into an empty bottle. See *Auscultation, Chest*.

AMPUTATION (from the Latin *amputo*, to cut off.) The removal of a limb, or other part of the body. In a book like this, intended altogether for popular use, it would be folly to enter at all fully into the details of an operation which no unprofessional person would think of attempting, except under circumstances of a most extraordinary nature. Nevertheless, a few simple rules may be laid down for the guidance of the reader, should he ever be placed in a situation to require their application. The severance of a finger or a toe, or even a larger limb, or member of the body, may be caused by accident, and occur when and where the assistance of a surgeon cannot be obtained. The first thing to be guarded against, in such a case, is death by hæmorrhage or bleeding. If there is much of this, a handkerchief, or strong band of some kind, should be tied round any portion of the limb that may be left, as near to the bleeding point as possible, and pulled very tightly; if it can be near the trunk of the main artery, and a pad be placed directly over that, so much the better. Do not attempt to wash the bleeding surface, nor cover it from the air, until the hæmorrhage has stopped;

above all things do not bathe it with warm water, and let the patient lie in such a position as to elevate it above the rest of the body; should it be found impossible to tighten the band sufficiently by means of the hands only, insert beneath it a short piece of stick, and by turning this round, so as to twist the band, almost any amount of pressure may be obtained. See *Tourniquet*.



When the bleeding has ceased, as it will be almost sure to do, if these means be adopted, just cover the wounded part slightly with a piece of soft linen or cotton; if this cannot be obtained, make the patient as comfortable as possible, and await the surgeon's arrival, if there is a possibility of obtaining one, should there not be, an attempt to tie the arteries must be made, as the compression necessary to stay the bleeding could not be kept up for a very long period, without producing mischievous results from the impeded circulation. A slender hook, or a small pair of pointed forceps should first be procured, and then, the lacerated part being placed in a convenient position, and the bandage loosened, the position of the arteries which are likely to bleed may be noted by the emission of the arterial blood, which is of a bright red colour; each thread-like artery should then be taken hold of gently, but firmly, and drawn out sufficiently far to allow of a piece of fine silk being tied tightly round it: this is a delicate operation, and often requires much time and patience even on the part of the skilful surgeon; but it may be accomplished by any one who has a quick eye and a steady hand, in addition to the above requisites—or, rather, by two, for one should hold the artery while another ties it. The cessation of the flow of blood will indicate whether the work has been done effectually, but even when it has, the band should not be taken off, but left so that it can be drawn tight on the instant, should hæmorrhage come on again. In some cases it might be necessary for a non-professional person to complete the severance of a limb, the bone of which had been crushed; he should apply the band before doing so, and cut with a sharp knife, boldly, dismissing

from his mind as much as possible all thought of the suffering occasioned by the operation; if the patient seems likely to sink under the agony and loss of blood, restoratives should be administered, brandy is about the best, and generally the most easily procured; but if he bears it well, it is best to avoid spirits for fear of increasing the inflammatory action, which is pretty sure to be set up in the wounded part, and spread through the system: low diet is best as a general rule, quiet, and a recumbent position, as many comforts as circumstances will allow, constant watchfulness on the part of those attending, and a cold water dressing for the wound until all fear of inflammation is at an end; then nourishing food with slightly stimulating drinks; and, for the rest, see *Wounds*.

AMYLIC ACID. A volatile acid, prepared by digesting moistened starch with *Peroxide of Manganese*.

AMYLUM (Starch), from the Greek *a not*, and *mylos* a mill, prepared without a mill. This is a substance found largely in wheat and other farinaceous plants, such as the potato, arrowroot, &c. It is demulcent and slightly nutritious; externally it is a good absorbent, and is much used for dusting over the body to absorb irritant secretions, especially for children; every nurse is acquainted with the value of Infant's Powder, which is but powdered starch, scented or not, as the case may be. In enemas where there is an irritated state of the rectum, starch is useful; mixed with carbonate of soda, it may be recommended for some skin diseases. To poisoning by Iodine it is a perfect antidote, if it can be taken in time. In the Pharmacopœia there is a Decoction or Mucilage of Starch, and also a Lozenge. For medical purposes, wheat starch is generally used; that from the potato, arrowroot, &c., being more frequently employed as an article of diet, which see; also *Farina*, *Fecula*.

AMYRIS (from the Greek *myron*, myrrh). A genus of fragrant resinous plants, of the natural order *Terebintaceæ*; the species best known to us as medicinal are *Amyrus Elemifera*, producing the *Gum Elemi*; *A. Gileadensis*, the resinous juice of which is called *Balsum of Gilead*, or *Mecca*; and *Balsamodendron Myrrha*, yielding, *Gum Myrrha*, all of which see.

ANA (same as *Aa*), from the Greek, signifying of each, used in *Prescriptions*, which see.

ANÆMIA (from the Greek *a not*, and *aima* blood), want of blood. This is a condition of the constitution in which there is a deficiency of the red globules or colouring

matter in the blood; it is marked by extreme pallor in those parts, such as the lips, which are generally suffused; and is not uncommon in young females of a weak or scrofulous habit. It appears to arise from a deficiency of vital energy in the system, either constitutional, or brought on by want of nourishment, breathing impure air, or great loss of blood. In any case a cure may be effected by good generous diet, pure air, moderate exercise, and strengthening medicines. Any of the various preparations of *Iron* (which see) may be taken, in combination, if the appetite be bad, with some bitter tonic, such as Infusion of Gentian, with a little Quinine. Should there be much emaciation, Cod Liver Oil, taken in Orange Wine, will be of service. The pores of the skin should be kept open by tepid sponging, and the bowels moderately so by a Rhubarb or Colocynth pill now and then. Strong purgatives should be avoided, and especially salines. In young females the absence of the monthly discharge need cause no uneasiness; with returning strength that will most likely return; should it not do so, however, when this treatment has been persisted in for a time, and should the pallor, languor, sleeplessness, headache, confined bowels, swelling of the feet, &c., which generally distinguish *Anæmia*, continue, a medical man ought to be consulted, as it is likely there may be consumption, or other organic disease, at the root of the mischief. See *Chalybeates*, *Chlorosis*, *Iron*, *Tonics*.

ANÆSTHESIA (from the Greek *a* not, and *aisthesis*, perception). Loss of feeling, or sensation. This may result from disease, or be brought about by the inhalation of chloroform or ether; or locally by the application of ice, or intense cold. See *Freezing*.

ANALEPSIS (from the Greek *ana*, again, and *lambano*, to take). Recovery of strength after sickness.

ANALYSIS (Greek *ana* again, and *lyo* to solve). The re-solution of compounds into their original parts—the opposite of *synthesis*, which see. That which secret poisoners have now most to dread is chemical analysis; it has been shown that the skilful analyser can detect the 1000th part of a grain of arsenic in the decomposed viscera of a human body, and demonstrate its presence too. Several recent cases of death by poison have proved the importance of the chemists evidence in judicial inquiries, and although it is not so easy to ascertain the presence of vegetable, as of mineral poisons, yet even these, by a delicate series of tests and manipulations, may in very many instances be discovered. But this, although a

very important part of the analyst's operations, is, perhaps, not the most so; his inquiries into the chemical constitution of the various productions of nature, lead to great results, as to their utilization in the social economy of daily life.

ANASARCHA (Greek *ana* through, and *sark* the flesh). A scientific term for *Dropsy*, which see.

ANATOMY (Greek *anatomus*, to cut up). The art or science of dissecting organized bodies, for the purpose of ascertaining their internal structure; hence, the anatomist is a dissector, it may be, of plants, or of animals, although the term is most usually applied to one who directs his attention more especially to the latter; and if he examines into the structure and organization of the whole animal kingdom, for the purpose of comparison, of classification, and arrangement, he is called a *comparative* anatomist, such was our John Hunter, and the great French naturalist, Cuvier; while Liston and Sir Astley Cooper were simply anatomists, or as we should commonly term them *Surgeons*. See *Surgery*.

Anatomy has been described as 1st, *Simple*, that which treats of the healthy state of the organs; 2nd, *Morbid*, or *Pathological*, that which treats of diseased states, or alterations of the structure; 3rd, *Descriptive*, that which relates to the parts as displayed by the scalpel; 4th, *General*, that which relates to the tissues, or elementary composition of parts; 5th, *Surgical*, that which teaches the relative situation of parts; 6th, *Comparative*, that which relates to the anatomy of the lower animals; 7th, *Transcendental*, relating to the mode, plan, or model upon which the animal frame or organs are formed. Most commonly, however, there are but two great divisions of anatomy spoken of, viz.: 1st, *General*, having regard to the various features and portions of the body; and 2nd, *Structural*, relating to the intimate connection and structure of the various substances, as determinable by a very close investigation, in which the microscope is now generally used. Barclay divided the second under eight heads or aspects; and other anatomists have adopted arbitrary arrangements, with which we need not trouble our readers. Neither shall we enter here upon a description of that of which anatomy treats, viz.: the human body; for which see *Skeleton*.

ANAUDIA (Greek *a* not, and *ande* speech), deprivation of voice. See *Catalepsia*, *Dumbness*.

ANETHUM (Dill). The aromatic seed, or fruit of *Anethum graveolens*, belonging to the natural order *Umbelliferae*. It is mildly

stimulant and carminative, and much used in flatulency, especially for children, and as



a vehicle for active purgatives, to correct their griping effect. The Dill Water of the shops is, generally, made by rubbing down the Oil of Dill with sugar or magnesia, adding water and filtering: the proportion is about one drop of oil to one ounce of water. The dose is from half an ounce to two ounces for adults; and from a teaspoonful to a dessert spoonful for children. See *Carminatives*.

ANCHYLOSIS (Greek), a stiff joint, caused by the union of two separate bones by fresh osseous matter formed between them. This union may be, in medical phrase, either *true* or *false*; in the former case it is formed of lymph thrown out by two ulcerating surfaces, blending together in one mass, and becoming organized; in the latter, it is merely a jointure of the ligaments, which becoming stiff, results in immobility of the joint. If the stiffening of the joint is complete, there is no remedy for it; if, as is sometimes the case, it is only partial, warm

It-water bathing, with daily attempts at movement, and friction with Cod-liver or other oil, may do much towards a restoration of the limb to its former state of usefulness.

ANEURISM (from the Greek *aneuryino*, to dilate). The dilation of a vessel or vessels so as to produce a rupture. Hence we have *A. Cordis*, the dilation of the heart; *A. Verum*, the uniform dilation of all the coats of an artery; *A. Spurium*, the dilation of an artery in one direction only from disease of its coats; *A. Varicosum*, the disease which arises when the lancet passes through a vein, and wounds the adjoining artery; *A. Anastomosis*, a tumour formed by enlargement of numerous vessels.

Aneurism has been defined by Sir Astley Cooper as "a pulsating tumour, containing blood, and communicating with the interior of an artery." To this definition, as this eminent surgeon admits, there is one exception, "namely, where aneurism, as is sometimes the case, takes place near the heart."

Aneurisms may be internal or external: in the former case being so situated in the cavities of the body, as in the abdomen, chest, or cranium, as to render the nature of the disease often very doubtful; in the latter, they are so placed in the limbs that access may be easily had to them. The whole arterial system is liable to aneurisms; but they occur much more frequently internally than externally, and oftener, according to some authorities, in those main trunks near the heart, than elsewhere: they usually occur in persons of advanced age, such being most liable to calcareous depositions of the coats of the arteries, which are among their predisposing causes, with which may also be named, violent contusions, abuse of spirituous liquors, frequent use of mercurials, fits of anger, extension of the limbs, straining, and violent exertion of any kind; gunshot, and other wounds, also frequently cause aneurisms, which few persons long addicted to intemperate habits escape.

Symptoms of an aneurism. In the early stage there is a small tumour, pulsating very strongly, more or less evident to the sight and touch according to the depth at which it is seated. Sometimes its presence is only known by the rapid pulsation, and pain, and tenderness of the part: sometimes, only as it interferes with the functions of some important organs, producing impeded respiration, cough, and other distressing symptoms, and ending in death; for which, without a post mortem examination, the physician can assign no adequate cause. For the internal form of the disease no remedial measures can be advised; they depend so much upon situation, and other varying circumstances, that only the medical practitioner can judge of the means to be employed.

Treatment of external aneurisms. This must also depend very much on circumstances. They are often formed on the principal arterial trunks of the upper and lower extremities, or of the neck, as in the carotid: the pulsating tumour, at first filled with fluid blood, which can be pressed out if the finger is passed gently along it, gradually becomes firmer and harder, assuming the character of a solid swelling, retarding the circulation by pressure on the surrounding parts, and causing muscular spasms, cramps, and sudden twitchings. If situated near the joint of a limb, the motion thereof becomes impeded, and inflamed swelling of the whole part often ensues; the cuticle covering the aneurism assumes the appearance of a blistered surface; finally, the sac opens, blood issues forth, which continues to flow from time to time, and the patient dies from weakness occasioned by loss of blood, or by the setting in of gangrene, which spreads up the limb, should it not be timely removed, and so causes death. Pressure upon the artery, so as to stop the flow of blood into the sac, has been recommended of late; but it causes greater pain than can be generally endured, and does not appear to have answered in the majority of cases in which it has been tried. A surgical operation appears to give the best chance of a cure; and this, which consists in dividing and tying the artery on which the aneurismal tumour is situated, can be attempted by no unprofessional person.

No external irritant liniment or friction must be applied in aneurism; nor fomentations and other hot applications. When the bleeding has commenced, the strength must be sustained by good nourishing diet; but, until it has, it is best to keep the system low: active exertion must be avoided, both mental and physical, and also pressure upon the part affected. In *Varicose Aneurism*, often caused by a wound in the brachial artery (in *Venesection*, which see), there is usually a tumour situated at the bend of the arm, which generally proceeds to about the size of a walnut or pigeon's egg, and then remains stationary, causing some inconvenience, but resulting in no very serious consequences; the limb is, perhaps, weakened, and there is a peculiar and unpleasant vibrating thrill felt, or communicated to the ear, called by some writers a *rilling* noise. For this form of the disease no operation is necessary, as it is for several other forms. See *Arteries*, *Varia*, *Varicose Veins*.

ANGELICA. Botanical name *Angelica Archangelica*, a plant of the natural order *Umbelliferae* or *Apiaceae*, the seeds, leaves,

stalks, and roots of which possess stimulant, carminative, and tonic properties, which are strongest in the latter. It has a pungent taste and an agreeable, aromatic odour.



Dose, of the powdered root, from 10 to 20 grains; Distilled Water 1 ounce; Extract, from 5 to 15 grains; Infusion, a tablespoonful or more; Tincture, a drachm; Spirits, from half a drachm to 3 drachms. The confectioners prepare a sweetmeat of the root with sugar, which is pleasant to the taste and agreeable to the stomach. See *Carminatives*.

ANGINA (from the Greek *agko*, to strangle), a name given to several diseases of the organs of the throat; thus, we have *A. Tonsillaria*, an affection of the *Tonsils* (which see); *A. Maligna*, malignant *Sore Throat* (which see); *A. Trachealis*, sometimes called *Tracheitis*, inflammation of the *Trachea* (which see); also *Croup*; *A. Parotidea*, inflammation of the parotid and submaxillary glands (see *Mumps*).

ANGINA PECTORIS (from the Latin *Pectus*, the breast), a disease which is commonly connected with ossification, or other morbid affections of the heart; it is characterized by a sudden and most violent pain across the chest, which extends down the arms, and seems to threaten immediate dissolution. It sometimes comes on during rest, but most usually after violent exertion; the

paroxysm does not commonly last long, but it has been known to continue for an hour or more. It is not much under the control of medicines, but may be sometimes greatly relieved by rubbing over the seat of pain, warm applications, and the administration of *antispasmodics*, (which see.) An anodyne combined with Ammonia has sometimes been found very effectual in relieving the spasm; the following is a good formula:—Fœtid Spirits of Ammonia half an ounce; Solution of Morphine 3 drachms; Camphor Mixture 6 ounces. Take a table spoonful every half-hour until relieved. If the paroxysm is very violent, a little hot brandy and water may also be taken. In the intervals between the attacks, the system should be strengthened as much as possible, and care taken to keep the patient quiet; excitement, either physical or mental, is likely at any time to bring on the pain. An issue over the seat of the disease is sometimes of great service, and an application of Vitriolated Zinc has effected a cure. See *Heart disease*.

ANGIOLOGY (Greek *aggeion*, a vessel, and *logos*, a discourse). The science of the vascular system. See *Veins*.

ANGULAR (Latin *angulus*, an angle). The name of the facial vein when it reaches the side of the nose near the *Eye*, which see, and *Veins*.

ANGURSTURA or **CUSPARIA**. The bark of the *Galipea Cuspari*, a plant of the natural order *Rutaceæ*, has been used in tropical climates as a substitute for Cinchona. In Europe it has been employed to some extent in atonic dyspepsia, chronic diarrhœa, and dysentery. Dose, of the powdered bark 5 to 30 grains; infusion, 1 to 2 ounces; tincture, 1 to 2 drachms.

ANIMALCULES (abbreviation of animals), living creatures which can only be seen by the aid of the microscope, which exist in water, and all fluids impregnated with animal or vegetable matter; they are often termed *Infusoria*: some discovered in the *semen* are termed *Spermatic*, and others have names given to them from the various liquids in which they exist. See *Water*.

ANIMATIZATION, the process by which food is assimilated or converted into animal matter. See *Aliment*, *Food*.

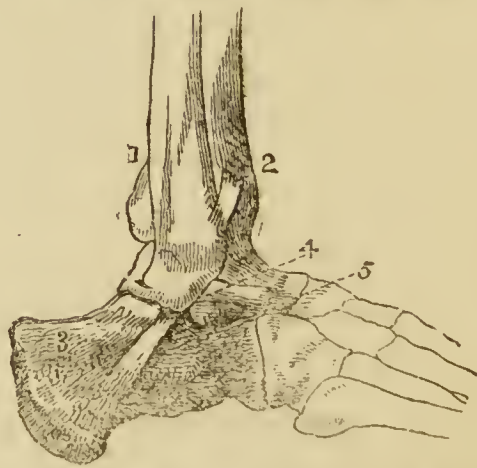
ANIME GUM. A resinous substance procured from the *Hymenœa Courbaril*, used in fumigating compositions, and *Plaisters*, which see.

ANISEEDS. The seeds or fruit of the *Pimpinella Anisum*, a plant of the natural order *Umbellifere*, of stimulant and carminative properties, good for flatulency, indigestion, and colic, particularly in infants.

Dose, of the powdered seeds 10 to 30 grains; infusion or distilled water, a wineglassful; compound spirit 1 to 4 drachms; essential oil 4 to 20 drops on sugar. See *Carminatives*.



ANKLE. This is the joint which connects the foot with the leg, it is called a hinge joint, and is formed of the extremities of the large and small bones of the latter



(1, 2), and the smooth surface of the *Astragalus* (3) a bone of the former, articulated together, and kept in their places by strong ligaments (4, 5).

The *Ankle-joint* from its position is peculiarly liable to a strain or dislocation, or fracture of the small bones which form its points of unity; and there is often consi-

derable difficulty in ascertaining the precise nature of the injury which it has received, on account of the swelling and inflammation which commonly sets in soon after it is done. Should it be simply a *sprain*, or *strain*, let the course directed in such cases be pursued. If it is a dislocation, as may generally be known by the foot hanging down in a distorted position, a surgeon ought to be sent for; should the aid of such not be procurable, an attempt to reduce it should at once be made. Place the patient in a recumbent position, and grasp the leg firmly just below the calf, holding it so that it cannot move; then let another person take hold of the foot with both his hands, by the heel and instep, and pulling it out as far as his strength will permit, turn it gently into its proper position; he will generally, after a little manipulation, feel it slip into the socket, and will know by the more natural appearance of the foot, that his object is effected; if, however, much time is lost, and the parts get swollen and inflamed, the operation becomes more painful and difficult. When it has been successfully performed, the part should be carefully, but not too tightly, bound with a bandage steeped in vinegar and water, or refrigerant lotion of some sort, and kept quiet for a week or more; after that it may be rubbed with stimulant liniment, such as Hartshorn and Sweet Oil, or Opodeldoc and Liquor of Ammonia; but this must not be done until the swelling is reduced.

Distortion of the Ankle is not uncommon in weakly children, and frequently it is not noticed until the bones have become altered in shape, and even the spine is affected; it then requires a long course of treatment and the most careful attention to correct the deformity: boots made in a particular way, according to the requirements of the case, and leg-irons are sometimes used for the purpose, but not often with happy results. The best plan is to strengthen the system as much as possible with good nourishing diet, prohibit the child from standing long, or at all, in other than a proper position. A stout elastic sock or stocking may be worn with advantage, and the boots, which should be of cloth and come well up the ankles, should have the sole made thicker on the side towards which the foot inclines, so as to throw it in an opposite direction: bathing the ankles every morning with cold salt water, and rubbing them afterwards with a coarse towel, will help to stimulate and strengthen them. Even when children are born with distorted ankles, much may be done in this way to correct the deformity,

although no plan of treatment is always successful. See *Club-foot*, *Dislocation*, *Joint*, *Sprain*, &c.

ANNULUS (Latin, a ring), from whence comes *Annular*, as applied to bones, cartilages, and various processes of the human frame, as *A. Foraminis*, the muscular margin of the *Foramen Ovale*, and *A. Ovalis* the ring which surrounds the *Fossa Ovalis*. See *Ovarium*.

ANODYNES (from the Greek *a not*, and *odyne* pain). Medicines which assuage pain; generally *Opiates*, or *Narcotics*, (which see). These medicines act by diminishing sensibility and inducing sleep, or a state of stupor, which is near akin to it. The following is a list of the medicines of this class which are principally used, with their doses; a full account of their nature and uses will be found under their several heads. Camphor, 5 to 20 grains; Compound Spirits of Sulphuric Ether, half a drachm to 2 drachms; Extract of Aconite, a quarter to three-quarters of a grain; of Belladonna, half a grain to 2 grains; of Conium, 3 to 20 grains; of Digitalis, half a grain to 1 grain; of Hyoscyamus, 2 to 10 grains; of Lettuce, 3 to 10 grains; of Hop, 5 grains to 1 drachm; of Opium, half a grain to 5 grains; of Poppy, 2 to 20 grains; of Stramonium, 2 to 10 grains; Morphine, Acetate and Muriate of, from a quarter to half a grain. Pills of Conium, of Opium, of Ipecacuanha with Opium, of Soap with Opium, and several other Pills into the composition of which opiates enter, may be included; the dose is generally from 5 to 10 grains. Powders of Burnt Hartshorn, and of Chalk with Opium; dose of the former 5 to 20 grains, of the latter 1 to 2 scruples. Compound Powder of Ipecacuanha, commonly called Dover's Powder, 5 to 20 grains, and Tobacco, dried leaves, half a grain to 1 grain, seldom used. For children, Syrup of Poppies and Godfrey's Cordial are much used, the latter especially, to a very mischievous extent. The custom which prevails among the poor classes of giving their children "sleeping stuff" to keep them quiet, commonly, even when they have no disease, the pain of which requires alleviating, is most reprehensible: the children so drugged often grow up with impaired mental if not physical powers. Opiates should always be given with great caution, to the young especially; in the earlier stages of life they are seldom really needed. Like most of the wise Creator's gifts, they are a great blessing when properly used, but too often turned by abuse into a curse, as the examples of excessive tobacco smokers and opium eaters

frequently prove. In many acute and some chronic forms of disease, when the frame is racked with pain, or the brain excited to unnatural activity, it is often necessary to administer anodynes, and their soothing effect is felt like a foretaste of heaven. To the aged, who are weary and yet wakeful, they are sometimes a balm and a consolation, which it would be cruel to deny them; but, as we said before, the child seldom requires them, and if given at all, it should be only in the mildest form, unless under the direction of the medical adviser. Besides the above named forms of administration, there are also anodyne *Enemas*, *Fomentations*, *Inhalations*, and *Plaisters*, all of which will be spoken of under their proper heads.

ANOMALOUS (Greek *a* not, and *omalous* even), irregular, applied to the menses and other interrupted periodic actions.

ANOREXIA (Greek *a* not, and *orexis* appetite), loss of appetite.

ANORMAL (Greek *a* not, and *normus* natural), contrary to rule, unnatural.

ANOSMIA (Greek *a* not, and *osme* odour), loss of the sense of *Smell*, which see.

ANTERIOR (Latin, before), as applied to *Muscles* and *Nerves*, which see.

ANTEVERTIO UTERI (Latin *ante*, before, and *verto*, to turn), a morbid inclination of the *fundus uteri* to fall forward: the opposite of *Retrovertio* which see, and *Uterus*, *Womb*.

ANTHELMINTICS (Greek *elminthus*, a worm). Medicines which produce the evacuation of worms from the stomach and intestines. These mostly act mechanically, dislodging the worms by the roughness of their particles, or by their cathartic operation. Some appear to owe this beneficial action wholly to their bitter properties, which prove noxious to the creatures, or by restoring the tone of the stomach and removing that debility of the digestive organs which prevented the proper assimilation of food, and conduced to the generation of the animals. Anthelmintics are best administered upon an empty stomach, hence it is common to prepare the way for them by an emetic: for a list of the principal of them with their doses, see *Vermifuges*, *Worms*.

ANTHEMIS (Camomile). The dried flowers of the common camomile (*Anthemis Nobilis*) belonging to the natural order *Compositæ*, are sufficiently familiar to every one. They have stomachic and tonic properties, which render them very useful in dyspepsia and general debility. Camomile tea, as the infusion is generally called, is a most agreeable bitter, and is of almost universal use and

acceptance. Taken warm it promotes the action of emetics. The flowers steeped in boiling water are frequently used as fomen-



tations for abscesses and inflamed parts, to promote suppuration and relieve pain; flannels dipped in the hot decoction answer the same purpose. Of the powdered flowers, from 5 to 10 grains may be given; of the infusion from 1 to 3 ounces; of the extract from 5 to 20 grains; distilled water 1 to 8 drachms; volatile oil 1 to 4 drops.

ANTHRACOKALI and **A. SULPHURETUM**. These are certain compounds not recognized as officinal, yet sometimes employed as alteratives in hepatic eruptions, and in scrofulous and rheumatic affections. The dose is about two grains three times a-day.

ANTHRAX (Greek for a burning coal) a dusky red or purplish kind of tumour, frequently occurring in the neck, and having its origin in the absorbent glands; treated the same, and considered by most medical authorities as a *carbuncle*, which see.

ANTI, against, a Greek word, although adopted into the Latin language, and much used as a prefix to medical and other scientific terms; thus in anatomy we speak of *Anti cardium*, over against the heart, meaning the *scrobiculus cordis* or pit of the stomach; *Anti cheir*, against the hand, the thumb; *A. enemion*, against the calf of the leg, the shin-bone; *A. helix* the part of the ear opposite the curl or twist; *A. inial*, an aspect of the head opposite to the occiput.

A. lobium, against the *lobus*, or inferior soft part of the ear; *A. thenar*, a muscle which extends to the thumb, after which it is named; *A. tragus*, a prominence of the ear opposite the tragus, connected with a muscle called *A. tragicus*. These all have reference to *situation*; other words there are with this prefix which relate to opposite action as *Antagonist* (from the Greek *agon*, a struggle), applied to a muscle which acts in opposition to another; *Antipathy* (Greek *pathos*, affection), aversion; *A. peristaltic* (Greek *peristello* to contract), a motion contrary to the *peristaltic*, which see.

Then again we find it applied to the operation of remedies good against disease, as may be here seen.

ANTI-ACIDS. Medicines which are intended to correct acidity of the stomach and bowels; their action is purely chemical; they combine with the acid and neutralize it, but do nothing to prevent its regeneration; therefore they are simply palliatives, and cannot be depended upon for restoring the tone of the impaired organs, whose powers, a long continuance of them is apt to enfeeble. Ammonia, Chalk, Lime, and all cretaceous matter, Magnesia, and the alkalines Potash and Soda, are the chief anti-acids, or *absorbents* (which see). These are many forms of preparations, but the action is pretty uniform. Ammonia in its various combinations, where acidity in the stomach exists with flatulency and tendency to *cramp* or *colic* (which see). Magnesia and the preparations of Chalk or Lime, are best when acid is present in the bowels, causing loose evacuations, griping pains, &c., and this because they pass down the alimentary canal, and into the seat of mischief, without losing their absorbent powers. Where an alkaline test shows acidity in the urine, preparations of Potash are most suitable for administration, as they are more readily soluble than Soda, which in combination with Ginger, may be recommended for the unpleasant sensation in the chest and throat, called *Heartburn* (which see) that being the result of excessive acidity.

ANTI-ARTHRITICS (from *arthritis*, Gout), (which see), remedies used for rheumatic and gouty affections of the joints and extremities, &c.

ANTI-CONVULSIVES. Medicines which act specifically upon convulsive diseases, such as *Epilepsy*, *Chorea* (which see). They are mostly too powerful to be used by other than skilful hands, comprising the preparations of *Silver*, *Arsenic*, and *Zinc*, which see.

ANTI-PERIODICS. Used to combat periodic diseases, such as *Ague* and *Intermittent*

*Fever*s (which see), the preparations of *Cinchona*, *Zinc*, and *Arsenic* are those chiefly used,

ANTI-PHLOGISTICS (from *phlogon* to inflame). Remedies which reduce the heat of the system by acting upon the heart and larger vessels; they are used chiefly in fevers and inflammatory disorders. See *Febrifuges* and *Refrigerants*.

ANTI-SCROFULICS, good against *scrofula* (which see), also *Cod-liver Oil*, *Iodide of Potassium* and *Sarsaparilla*.

ANTI-SPASMODICS. As spasms may arise from a variety of causes, so must the remedies for them be numerous and diverse in character; thus narcotics, sedatives, stimulants, nauseants, aperients, stomachics, tonics, blood-letting, the hot bath, and application of dry heat, all, at different times, come under the above denomination; but as the immediate cause of spasms is commonly wind in the internal cavities or passages of the body, those medicines, which have a direct action thereon are especially anti-spasmodic; such are *Assafoetida*, *Valerian*, *Galbanum*, *Ether*, essential oils of *Mint*, *Anise* and *Dill*, *Ginger*, *Spirits of Ammonia*, *Brandy*, all of which see.

ANTI-SEPRONICS are those medicines which have a peculiar and specific effect upon scaly diseases of the *skin*, which see. The chief of them is *Arsenic*, which see, also *Skin Disease*.

ANTISEPTIC is that which has the property of retarding putrefaction; here we have to do with antiseptic medicines, which may be classed under four heads, viz.—*True Antiseptics*, such as *Peruvian* and *Angostura Bark*, *Camomile*, &c., which act as preservatives by strengthening the tone of the stomach, and being suitable for every condition of body, are preferable to all others for relaxed habits; we shall say more of these under the head of *Tonics*: 2, *Refrigerating Antiseptics*; best adapted for the young and robust, especially if of plethoric habit, see *Acids*; 3, *Stimulating Antiseptics*, such as *Wine* and *Spirits*, and warm and nourishing dietetic preparations, such as are required by the old and debilitated; see *Stimulants*: 4, *Antispasmodic Antiseptics*, such as *Camphor* and *Assafoetida*, suitable for irritable and hysterical habits. See *Antispasmodics*. In relation to their preservative effects upon morbid animal matter, *Salt*, *Lime*, *Charcoal*, *Vinegar*, and *Camphor* may be named as the greatest antiseptics known; *Chlorine gas* also should be included in this list, which contains what are generally considered as the most powerful of *disinfectant* which see.

ANTIDOTES are capable, if employed in time, of averting the fatal effects of *Poisons*, (which see). *Didomi*, I give, is the Greek origin of the second syllable, the word, therefore, means, I give against, and it has sometimes been employed to signify a remedy given for any disease, but chiefly such as was considered inveterate. In old writers we sometimes find it employed to signify a standing form of medicine, such as Opiates, Confections. See *Poisons*.

ANTIMONY (Latin, *antimonium*, from the Greek *anti*, against, and *monakous*, monks). So called, say some authorities, from its fatal effects on the monks,—where, and on what occasion, we are not informed. Antimony is a metal commonly found associated with sulphur; it forms the base of several medicinal preparations of great utility, although possessing dangerous properties. In old Pharmacopœias it appears under the various forms of *Crude Antimony*, which is the ore mixed with Sulphur; *Regulus*, the pure metal; *Argentine Flowers*, an oxide, the result of combustion of the metal; *Glass*, *Liver*, and *Crocus* of Antimony, which are all oxy-sulphurets, the result of heating and vitrification of the ore. There is also *Powder of Algaroth*, a protoxide (see *Algaroth*), and *Kermes Mineral*, which is the golden Sulphuret of Antimony, so called from its resemblance to an insect of that name, and its rich yellow colour.

The preparation of Antimony now chiefly used in medicine is the *Potassio-Tartrate*, commonly called *Tartar Emetic*; externally a counter-irritant, applied in the form of ointment; internally a diaphoretic, in doses from 1-12th to 1-16th of a grain; an expectorant 1-16th of a grain; a contra-stimulant and emetic from 1 to 3 grains. This is the most certain in its operation of all the preparations of Antimony; hence its frequent employment in febrile and other diseases, especially those of the lungs and bronchial passages. Its most common form of administration is Antimonial Wine (*Vinum Antimonii Potassio-tartras*), the dose of which for adults is from 20 to 30 minims; as an emetic for children, from $\frac{1}{2}$ to 1 drachm may be given every quarter of an hour until it operates. It is very useful in Hooping and other Coughs, to promote expectoration and relieve the chest and trachea of phlegm; and in active inflammation of the lungs, &c. The effect of Antimony upon the pulse is generally very marked and rapid, and the prostration of strength which follows its administration, renders it a dangerous remedy in the hands of the unqualified practitioner. It is much too indiscriminately given; few

considering, when they run to the druggist for a pennyworth of Antimonial Wine, that they carry home to their children a diluted poison, whose action, even if apparently beneficial at the time, may eventually prove highly prejudicial. If an emetic is required, *Ipecacuhana Wine* is as certain in its operation, and much safer. See *Emetics*.

The caution cannot be too constantly impressed upon the public, that all preparations of Antimony, except very carefully crystallized Tartar Emetic, contain more or less *Arsenic*, a metal originally combined with Antimony in its native state, and pertinaciously associated with it through all its modifications. The Tartarized Antimony of the shops is not always “carefully crystallized,” hence the danger of its too indiscriminate use. In that sudden and often fatal disease in children called *Croup* (which see), Tartar Emetic is one of the most ready and effectual remedies. Should the attack be violent, 1-8th of a grain may be given every quarter of an hour. Preparative to the passage of an instrument into the urethra, or other constricted part, or the reduction of a dislocation, it is often administered with good effect, causing a relaxation of the muscles, and rendering the operation comparatively easy.

One of the mildest and safest forms of administration of Antimony is the Antimonial Powder (*Pulvis Antimonii Compositus*), commonly sold as James’s Powder, a patent medicine, from which it differs but little in its mode of preparation: dose, as an alterative, 1 to 3 grains; as a diaphoretic, 3 to 8 grains; in larger doses, an emetic and purgative.

Several preparations of Antimony combined with Sulphur are used as *Alteratives*, and *Antiscorbutics*, (which see). The celebrated Plummer’s Pill (*Pil. Hydrargyri Chloridi Comp.*) is one of these; this is commonly given in the secondary stages of *Syphilis*, which see.

For remedies for poisoning by Antimony, see *Poisons*.

ANTONII SANCTI IGNIS. The Latin for *St. Anthony’s Fire*, so called from an old monkish legend which ascribed its miraculous cure to St. Anthony. This is an inflammatory affection brought on by several causes which are likely to excite inflammation, such as exposure to cold, obstructed perspiration, suppressed evacuations, the application of acrid stimulants to the skin, &c. It comes on with the usual premonitory symptoms of fever, cold chills, and drowsiness, succeeded by heat and external redness, which, in the part immediately affected,

becomes for a time permanent; when it is the face, delirium sometimes ensues. When the inflammation is principally confined to the skin, and causes but little constitutional derangement, it is called *Erythema* (which see); but when the system is affected, as above described, it is *Erysipelas* (which see).

ANUS (Latin). The orifice of the alimentary canal; of which it is the outlet. It is kept closed by the *Spineta Muscle* (which see), which in health acts instinctively; but in certain diseases, such as paralysis, and the last stages of fever, it loses its power, and the evacuations become involuntary. In this case but little can be done in the way of local applications; astringent lotions of Alum and Sulphate of Zinc may be of some slight service, but the efforts must be mainly directed to the disease itself, from which the deficiency of power arises.

The chief of the unnatural or diseased conditions of the anus, are—

1st. *A. Imperforate*, in which there is a closure or obliteration of the terminal opening of the canal. It is sometimes the case with new-born children, and the medical attendant should always satisfy himself by actual inspection that it is not so; if it is, an artificial opening must be made; which only he ought to attempt. In some instances there is an external appearance resembling an anus, but it is covered by a membrane which is generally of a darker colour than the surrounding integuments, on account of the accumulation of fœces on the inner surface, which, pressing it downward, a roundish protuberance is formed, yielding to the pressure of the fingers, but returning when the pressure is withdrawn. Sometimes it is a fleshy adhesion which closes the intestine, and this offers greater resistance to the finger, and does not present the livid or blackened appearance before described. See *Fistulæ*, *Hæmorrhoids*.

The only variety in this kind of malformation in which the surgeon can be of service, is that in which the alimentary canal is complete, with the exception of the external opening, which can be made by means of an instrument called a *Bistoury* (which see), passed into the rectum, and through the interposing membrane; then, by the daily introduction of the finger, or an oiled bougie, until the edges of the wound become healed, a permanent opening may be made. The case is sometimes rendered very doubtful and embarrassing from there being no external appearance to denote where the anus ought to be; it is then a question whether the intestine is closed by a fleshy adhesion, or the coalescence of its sides, or whe-

ther a part of the gut be wanting, and the surgeon, if he operates, must do so very much at a venture. As, however, death must inevitably follow the permanent closure of the intestine, the effort to effect an opening should be made.

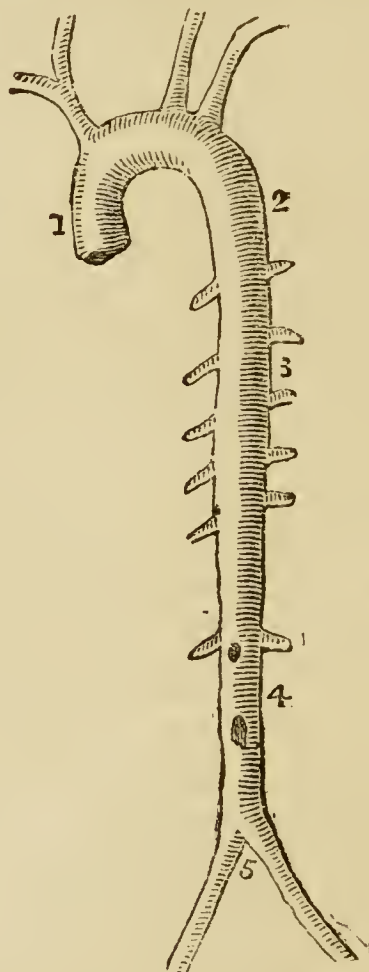
2nd. *Anus Artificial*. By this is understood an accidental opening in the sides of the abdomen, to which some part of the intestinal canal tends, and through which the fœces are wholly or partially discharged. This may be caused by the bursting of an abscess externally, a gunshot or other wound in the belly, ulceration of the bowel, or an opening purposely made with the view of saving life, or an accidental wounding of the gut in an operation for *Hernia* (which see). The remedies applied to this class of cases may be either simply palliative or remedial; the former are intended to obviate the uncleanness produced by the involuntary discharge of the intestinal matter, and to relieve any bad symptoms which may arise. The first of these objects is effected by attaching to the opening a small machine of tin or silver, or a tube of elastic gum, conducting to a receptacle for the discharged fœces, placed in some convenient position; these, however, are troublesome contrivances, and rarely answer the intended purpose completely. Some have proposed a piece of sponge kept over the opening by a truss; but this is apt to produce cholic, costiveness, and an excoriated state of the skin. If the opening is disposed to contract too much, a tent, or skein of silk, may be introduced into the aperture; this should be changed frequently, for the sake of cleanliness; some have preferred a ring of ivory for this purpose. Sometimes the gut protrudes, and then its reduction may be effected by gentle pressure, unless the protruded part should be thickened and inflamed when, as in the case with stranguated hernia, it is generally considered irreducible, and excision must be had recourse to. Compression with a bandage moistened with some cooling lotion has, however, been successfully adopted, care having been taken to leave open a passage for the fœces. No directions can be given here for any attempt to effect a radical cure of this disease; only the skilful surgeon can judge of the necessity and propriety of such an attempt, and of the proper mode of operation.

Anus Prolapsus. This is the protrusion, in a greater or less degree, of the rectum at the anus, caused by the relaxation of the internal membrane, or from a displacement of a portion of the bowel; this form of disease is most common in children and old

people; it may be small, resembling a mere ring; or large, hanging far down in an oblong globular form. The tumour may, generally, be reduced, although, sometimes, with considerable difficulty. Its exciting causes may be traced to every circumstance which tend to relax, or weaken, the parts which retain the rectum in its inner membrane in the proper situation. Irritation and pressure on the bowel itself, diseases in the adjacent parts affecting the rectum by sympathy; hence, long continued crying, violent coughing, straining to void hard dry fœces, obstinate diarrhœa, dysentery, frequent use of aloetic purgatives or emollient clysters, hæmorrhoids, difficulty in making water, efforts at parturition, stone in the bladder, and paralysis of the muscles of the anus. Three objects are to be kept in view in the mode of *treatment*:—1st. the prompt reduction of the prolapsed part, which can, generally, be effected by the patient assuming a recumbent position, and pressing it back gently, if it does not go of itself, with his fingers; should it be obstinate, on account of swelling and inflammation, such efforts must not be long persevered in, but recourse had to leeches, fomentations, or cold lotions, with the exhibition of a dose of Castor Oil, and an emollient enema to empty the larger intestines. 2nd. The retention of the reduced bowel; quietude and a recumbent position are necessary to effect this object. If there be a tendency to relapse, apply to the fundament a piece of sponge or compresses of lint, supported by a T bandage. (See *Bandages*). Adults may wear an instrument which may be obtained of any chemist or surgical instrument maker. 3rd. The removal and avoidance of causes known to have a tendency to bring on this complaint; everything disposing to costiveness and diarrhœa, or to straining of any kind, should be avoided. Irritability of the rectum may be lessened by anodyne lotions and small doses of opium; acidity in the bowels causing flatulency, corrected by *Anti-acids* (which see). Infants liable to *Prolapsus Ani* should use a high close stool, with their legs freely depending. It should be observed that no art can rectify the displacement of the higher part of the bowel, especially of the *Colon* or *Cæcum* (which see); but nature has many processes by which she effects a remedy for internal as well as external injuries, thus considerable portions of the intestinal canal, which have become inverted, have been known to separate and been voided, with little more than a temporary inconvenience to the patient. See *Bowels, Intestines*.

Itching of the Anus is, generally, indicative of *Worms*, which see.

AORTA (Greek, *aer* air, and *tereo* to keep). The great channel of arterial blood proceeding directly from the heart; so named, because it was formerly supposed to contain only air. It is distinguished in surgery as *ascending* and *descending*; the former being



beyond the arch represented in the cut (1), and the latter the long trunk (2); this trunk or channel is again divided into the thoracic portion (3) because it traverses the chest, and the abdominal portion (4) as it passes through the abdomen; below this it divides into two branches, for a description of which, as they bear other names, we must refer to *Arteries*. From the upper arch of the aorta (5) also spring several large branches, and smaller ones are thrown out on every side, all down the course of this great channel of vitality; in it all the secondary arteries have their course, except one, the *Pulmonary* (which see); it opens into the heart, just opposite the junction of the fourth rib with the breast-bone, and the blood pumped into it by the alternate compression and dilation of that organ, is prevented from returning by three semicircular valves. See *Heart*.

The most common diseases of the aorta are

Aneurism (which see), and *Aortitis*, or inflammation of the aorta; for treatment of which see *Inflammation*.

APO (Greek, from or of). Its compounds as far as they relate to the subjects here treated of, are 1. *Apo neurosis* (Greek *neuron*, a nerve) a fibrous or tendinous expansion in the thigh, it was erroneously supposed by the ancients to be that of a nerve, hence the name; we call it *Fascia lata*. See *Thigh*. 2. *Apo physis* (Greek *phyo*, to produce), a process and a part of a bone. See *Epiphysis*. 3. *Apo plexia* (Greek *plexia*, to strike). See *Apoplexy*. 4. *Apo sepedine* (Greek *sepedin*, putrefaction), a substance formed from the putrefaction of animal matter, sometimes called *Caseus Oxide*, which see. 5. *Apo stema* (Greek *istemi*, to stand), an *abscess*, which see. 6. *A-potheca* (Greek, a shop). See *Apothecary*. 7. *Apo zem* (Greek *zeo* to boil) a *Decoction*, which see.

APOCYNUM CANNABINUM. The plant, of which this is the botanical name, belongs to the natural order *Apocynaceæ*. In America it is called Indian Hemp; but this name properly belongs to another species. See *Cannabina Indica*. The root of the above is emetic, cathartic, and sometimes acts as a diuretic, diaphoretic, and expectorant. Dose, of the powdered root 15 to 20 grains; decoction 1 to 2 ounces three times a day—useful in dropsies; extract, 3 or 4 grains, three times a day.

APOPLEXY (Greek as above).—This is deprivation of life or motion by a sudden stroke, or blow: it is one of the most awful and appalling modes of sudden death; in an instant a healthful and vigorous man is smitten down, one who has exhibited no signs of decay or disease, who has perhaps received no premonitory warning, lies before us motionless and stark.

Apoplexy may be either *cerebral*, proceeding from congestion or rupture of the brain, or *pulmonary*, proceeding from hæmorrhage into the parenchyma of the *lungs* (which see). The first is its more common form, and this may be spoken of under four heads, 1st, when it is sudden and violent at once; 2nd, when it is comparatively slight at the commencement, and progressively increases in severity; 3rd, when it commences in apoplexy and terminates in paralysis; 4th, when it commences in the latter, and terminates in the former.

The *causes* of apoplexy are either predisposing or exciting; among the first may be named—1st, *Sex*: men are more liable to it than women, because they are more sub-

ject to its exciting causes of which we shall presently speak—2nd, *Age*: it is very rare in childhood, rare also in youth, most common between the ages of 40 and 70, rare much beyond the latter age—3rd, *Bodily Conformation*: the man of sanguine and plethoric temperament, with large head, short neck, and full chest, is most liable to its attack, although one of the opposite state and condition of system is sometimes smitten down by it.—4th, *Mode of Life*: persons of sedentary habits, who live luxuriously, are its frequent victims.—5th, *Suppression of Evacuations or Eruptions*, as the piles, perspiration, healing of a seton, or a wound. 6th, *Mental Anxiety*: such as a long continuance of harassing fears, business perplexities, grief, or any violent emotion, or passions. All these are predisposing causes of apoplexy to which it has been said that the studious are more liable than others; but this is an error, as the history of lawyers, judges, and philosophers ancient and modern is sufficient to show; persons of advanced age, who take rich and stimulating diet in more than sufficient quantity, and whose intellectual faculties are exercised but little, are those most frequently carried off by this embodiment of the Greek idea of the “skeleton at a feast.” The most powerful *exciting causes* of apoplexy, then, are intemperance, whether in eating or drinking, as well as violent exertions of the mind and body; whatever, in short, tends to determine the blood with an undue impetus to the brain or impedes its return from it, is an invitation to this dreadful destroyer to step in and arrest the vital current in its flow, as the breath of frost stays the water of the river.

Treatment. This, of course, must vary considerably, in accordance with the pathological condition of the brain of the person attacked, and with other circumstances which only those accustomed to the treatment of disease can judge of. The *immediate* measures to be adopted when a fit of apoplexy comes on, which may be known by the patient falling down in a state of insensibility, or stupor, out of which it is impossible to rouse him by any of the ordinary means; the face is generally flushed, the breathing difficult and stertorous; the upper lip-margin is projected at each expiration; the veins of the head and temples protrude as though overfilled, the skin is covered with perspiration, and the eyes are fixed and blood-shot: sometimes, however, the face is pale, with a look of misery and dejection, and the pulse instead of being full and hard, is weak and intermitting;

in the former case, as soon as the patient has been placed in a sitting position with the legs depending, every thing about his neck removed, and the air freely admitted, a vein should be opened in the neck or arm, and the blood allowed to flow until the pulse is greatly reduced; a pallor in the face, and a generally relaxed state of the muscles, shows that fainting is about to ensue: in the latter case, it is necessary also to relieve the neck of all pressure, to place the body upright, and admit air—but beyond this the treatment must be different; cold water should be dashed in the face, strong Spirits of Ammonia applied to the nostrils, and the feet put into a warm bath with a little Mustard, and every means taken to arouse the patient from his state of lethargy: as soon as this is so far effected that he can swallow, give $\frac{1}{2}$ drachm of Aromatic Spirits of Ammonia in $1\frac{1}{2}$ ounces of Camphor Mixture, as a stimulant draught, but it is only when the pulse is feeble and fluttering that the stimulant may be administered; this is the exceptional case in apoplexy; most commonly the symptoms are those first described, and if relieved at all it must be by free bleeding and other measures of depletion. Purgatives must be got down as soon as possible, 10 grains of Calomel placed on the tongue, and washed down with a black draught, or two or three drops of Croton Oil may be rubbed on the back of the tongue, and a lavement composed of two table spoonfuls of Common Salt, with a little Oil or Butter, and a pint of Warm Water; or a tablespoonful of Soft Soap mixed with the same quantity of water; or an ounce of Spirits of Turpentine, rubbed down with the yolk of an egg, and a pint of thin Gruel: one of these should be repeated every two hours until some decided effect is produced. Other means of relieving the system may be taken should these fail, such as blisters behind the ears, to the nape of the neck, or calves of the legs; should the head be very hot, let it be shaved, and a cold lotion be applied to it, Water and Vinegar, or Acid Water, will do best. Should the attack be soon after a full meal, administer an emetic, a scruple of Sulphate of Zinc, with a grain or two of Tartar Emetic: something like this should always be given when apoplexy arises from the effects of opium or spirits. Cupping on the temples, or opening of the temporal artery, is sometimes resorted to in obstinate cases, and in pulmonary apoplexy: after the most violent symptoms are relieved by copious bleeding, nauseating doses of Tartar Emetic frequently repeated, or Digitalis, to reduce the action of the heart, have been

found useful. In all cases, after the crisis of the disease is over, and when the patient has become convalescent, it behoves him to be very careful, as a slight indiscretion may bring on a fresh attack.

We have said, that Apoplexy comes without warning, but this is not strictly true. However sudden the attack itself may be, there are certain premonitory symptoms which no prudent man will disregard: among these may be named, a sense of fulness in the veins of the head, and a feeling of pressure in the head itself, with occasional darting pains, giddiness, vertigo, partial loss of memory, and the powers of vision, and of speech; numbness of the extremities, drowsiness, and a dread of falling down; irregularity in the action of the bowels, and involuntary passage of urine. These all indicate that some internal mischief is going on, and if their warning is attended to, the threatened attack may, perhaps, be avoided. Persons, whose full habit of body and modes of life, predispose them to this disease, should, when such warnings reach them, live sparingly, avoid stimulants, especially fermented, and spirituous liquors, take regular and moderate exercise, sleep on a firm pillow with the head elevated, and nothing round the neck to impede the act of breathing. Keep the bowels regulated by an occasional dose of Colocynth and Calomel pills, and saline purgatives. Those of a spare habit should take light, although nourishing diet, a little beer or wine, if they have been accustomed to it, and it does not affect the head; spirituous liquors and hot spices should be avoided, and great bodily fatigue or nervous excitement of any kind.

APOTHECARY (Greek *apothekæ*, a shop, or store-room). This term appears to come from the above root, although we now apply it chiefly to one who compounds or prescribes medicines, and not to the vendor or shopkeeper. The apothecary of our day is the regular "Family Doctor," who, having obtained a licence to practise from a chartered incorporation, puts after his name the letters L.A.C., meaning Licentiate of the Apothecaries' Company, of London, incorporated by James I, in 1606; the association was then united with the Grocers' Company, but in 1617 it was formed into a separate company, with the exclusive right of dealing in and compounding drugs. At the close of the 17th century, the members of this association began to prescribe as well as dispense medicines; they soon after became the common medical attendants of the sick, and performed the functions both of

the physicians and surgeons of our day. As their calling became gradually elevated into a profession, there arose a new class to supply their place, those called chemists and druggists, who now deal in drugs, and compound medicines, as the apothecaries used to do; of these we shall have to speak by-and-bye. Several Acts of Parliament for restricting or extending the power of the Apothecaries' Company have been passed at different times; the last was in 1815, and this, as every medical practitioner is, to a certain extent, an apothecary, gives the Company a large amount of control over the profession throughout the kingdom. No person is legally qualified to practise unless he shall have served an apprenticeship with a licentiate of this company, passed before its board of examiners, and paid certain fees which they are empowered to demand for a license. The French *apothecaire*, and the Latin *apotheca*, come very close to the Greek original in sound and signification: there is no Apothecaries' Company across the channel, and the apothecary there is more of a medicine vendor and compounder than he is with us.

We may observe here that *apothesia* in Botany signifies a repository, and is applied to the cases in which the organs of reproduction of many of the *algæ* or sea-weeds are contained.

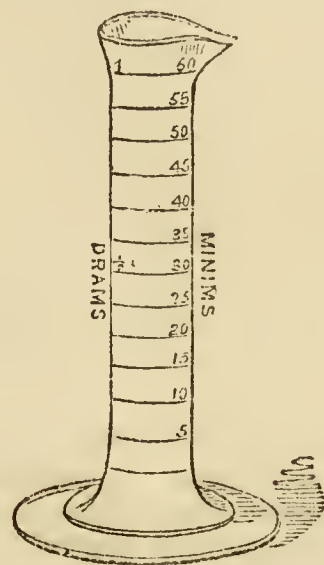
APOTHECARIES' WEIGHTS AND MEASURES, are those which are constantly used in the compounding and dispensing of medicines in this country: as a knowledge of them is essential to those who would attempt the domestic treatment of diseases, we give them *in extenso*.

Weights. One pound contains 12 ounces, or 5760 grains; one ounce 8 drachms, or 480 grains; one drachm 3 scruples, or 60 grains; one scruple 20 grains.

Measures. One gallon contains 8 pints, or 70,000 grains of water; one pint 20 ounces, or 8,750 grains; one ounce 8 drachms, or 437·5 grains; one drachm 60 minims, 54·7 grains.

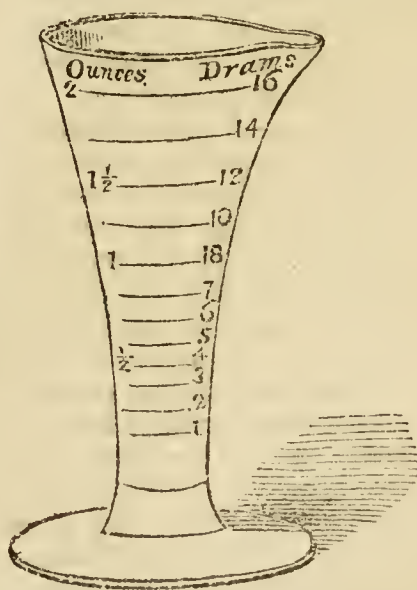
Symbols and Characters. lb. represents a pound; ʒ an ounce; ℥ a drachm; ℥ a scruple; gr. a grain; C. for *congius*, a gallon; O for *Octavious*, a pint: the prefix fl before ʒ or ℥, means a fluid drachm or ounce; m, a fluid minim; gtt. for *gutte*, a drop. The letters ss put after either of these characters signifies a half; thus, ʒss is half an ounce. It should be borne in mind that minim and drop are not the same quantities, the former containing nearly half as much more as the latter, thus 10 minims of Tincture of Opium are equal to 15 drops; formerly it was customary to pre-

scribe all medicines by drops, as let fall from the mouth of a bottle; but the quantity in a certain number of these differed so considerably according to the density of the fluid, or the vessel it was dropped from, that an alteration in the plan was found necessary, and that of admeasurement was adopted: we give below a cut of a minim measure, and also of one used for larger



Minim measure.

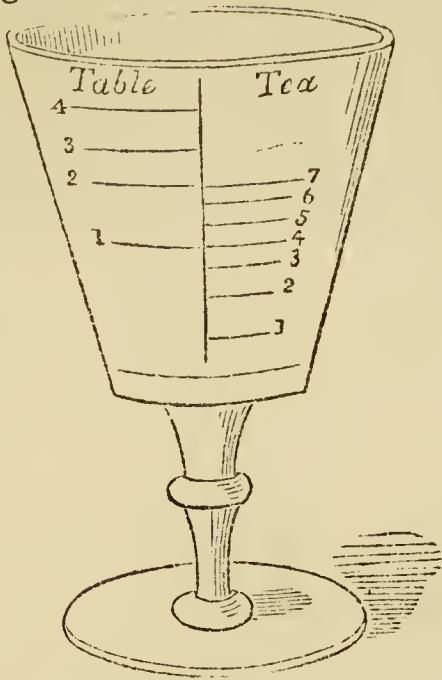
quantities; these may be purchased of any druggist at a low price; they are made of glass, some are large enough to contain a pint.



2 ounce measure

We give also a cut of a graduated medicine glass which is a useful article in the nursery or sick chamber; it should be explained that a table-spoonful is considered to be half an ounce, a tea-spoonful 1 drachm, a dessert-spoonful is 2½ drachms, a wine-glassful is 2 ounces; as spoons and glasses vary much

in size it is best to use a measure like this in giving medicines.



Graduated Medicine Glass.

APPETITE (Latin *Appetitus*), an instinctive desire to gratify any natural wants of the body, generally applied to the inclination for food, which in health is felt at certain regular periods; it is a warning to furnish the alimentary organs and tissues with fresh nutriment, and supply the place of that which has been absorbed, or otherwise conveyed away. God has ordained that we shall have pleasure in the gratification of this sense; he has given it as a blessing, yet it is too often turned into a curse by excessive indulgence. There is no greater symptom of a good state of health than a regular appetite, and its moderate and judicious indulgence is one of the best means of preserving this great blessing. Most commonly, when disease comes on, the appetite flags, and this is often a sign that Nature herself requires rest for those organs by which the conversion of food into nutriment for the body takes place. This is, perhaps, not sufficiently understood, or sick people would not be pressed by well-intentioned but injudicious friends to eat when they had much rather, and much better, leave it alone. See *Diet, Food*.

Loss of Appetite, may be considered as symptomatic of many diseases: Fever, Congestion of the Liver, Dyspepsia, Constipation. It generally attends all these and many more of the ailments of the flesh, as it does often an uncontrolled and anxious mind. Sedentary pursuits and want of proper exercise, often result in loss of appetite, arising from derangement of the digestive organs, so does breathing impure

air, excessive drinking, or any thing by which the tone of the stomach becomes injured and the general strength impaired. The proper remedy for loss of appetite, of course, must depend upon the cause of it; bitter medicines, such as Cinchona in its various forms; Gentian, Quassia, Calumba, or Camomiles, are those which usually lead to its restoration; the several preparations of Iron are also good, and the mineral acids, of course, in a greatly diluted form; fresh air and moderate exercise will also assist; but all will be in vain while the cause remains untouched.

A Depraved Appetite, consisting in the longing for, or devouring substances not intended for food, not unfrequently attends pregnancy, and the chlorotic diseases of young females (see *Chlorosis*). This is sometimes looked upon as a sign of mental aberration; but it is not so; a person may eat chalk, ashes, slate-pencils, cinders, earth, and other substances, injurious or otherwise, and yet be in a perfectly sound state of mind. The strange inclination is no doubt caused by disordered functions perverting the taste; intense longing after some unattainable object will sometimes have this effect: so the poor Negro, far away from his native woods and wilds, eats dirt,—and this is a form of diseased or depraved appetite.

Fanciful and Variable Appetites have also their origin in some functional disturbance; the former is very common in *Pregnancy*, the latter, where there are *Intestinal Worms* (both of which see). Sometimes a child will at one time eat voraciously, and at another scarcely at all; if, with this symptom there should be itching of the anus, pallor, disturbed rest, and gnawing pains in the bowels, resort to *Anthelmintics*, which see.

AQUA (Latin for Water, plural *Aquæ*), hence, *A. ex Laca*, Lake Water; *A. ex Nive*, Snow Water; *A. ex Putride*, Marsh Water; *A. ex Putio*, Well Water; *A. Fluvialis*, River Water; *A. Fontana*, Spring Water; *A. Marina*, Sea Water; *A. Pluvialis*, Rain Water. These, except the *Chalybeate* and *Sulphureous Waters* (which see) are all the natural kinds usually mentioned in prescriptions, and applied to medical purposes. Of the composition of the element itself, of its uses, and the impurities which enter into it we shall speak more fully under the head *Water*. At present, we have to do more especially with the artificial preparations to which the prefix *Aqua* is generally attached, such as *Aqua Distillata*, Distilled Water, that which has undergone the process of distilling, and is fit for

all purposes for which purity is essential. The lime and other impregnations which occur in most natural waters render them unfit vehicles for the exhibition of many salts, and other chemical preparations; therefore, that which has passed through the still is often used in compounding medicines. Distilled Waters is, also, a common name for those impregnated with the essential oil of vegetables, such as Cinnamon, Dill, Mint, &c., these all possess carminative or other properties, and are spoken of under the heads of the plants from whence they derive them. There are several others known as medicinal, whose names occur in the Pharmacopœias, such as *Aqua-fortis*, literally, Strong-water, one of the most corrosive of liquids (see *Nitric Acid*); *A. Calcis*, Lime Water (see *Lime*); *A. Phagadenica*, a lotion for ulcers formed by the decomposition of Corrosive Sublimate in Lime Water; *A. Picis Liquide*, Tar Water; *A. Regia*, Royal Water, so called, perhaps, because it has the power of dissolving even gold; this is a mixture of Nitric and Muriatic Acid (see *Acids*); *Aqua Toffana*, a deadly poison prepared by an infamous woman in Italy, the composition of which has never been precisely known (see *Poisons*); *Aqua Tosti Parnis*, Toast Water, a very useful drink in sickness.

AQUEDUCT (Latin *Aquæ ductus*, a Water course). This term is applied to several ducts or passages of the humours of the body; thus, there is the aqueduct of Fallopius, the canal by which the *portio dura* winds through the petrous portion of the temporal bone;—of *Sylvius*, the canal which extends backwards under the *tubercula quadrigemina* into the fourth ventricle (see *Brains*); of the *Cochlear*, is a foramen of the temporal bones for the entrance and exit of the blood vessels of the ear; of the *Vestibulum* (see *Ear*).

AQUEOUS, Watery, hence, *Aqueous humour*, the fluid which fills the anterior part of the *Eye* (which see); a vapour, the steam which arises from heated water. See *Baths*, *Steam*.

ARGEMONE MEXICANA (Yellow Mexican Thistle). See *Prickly Poppy*.

ARGENTUM (Latin for silver). Many preparations of this well-known metal are employed medicinally. The metal itself, in fine powder, has been rubbed into the tongue, to be absorbed into the system as a remedy in *Syphilis* (which see). The Oxide, Cyanide, Iodide, and Nitrate of Silver, are good tonics and antispasmodics; they are given in *Epilepsy*, *Chorea*, *Passive Hæmorrhages*, and *Gastrodynia* (all of which

see). The *Nitrate of Silver*, commonly called *Lunar Caustic*, is much used, both solid and in solution, in surgical cases, as a stimulant, vesicant, and escharotic; it is supposed to arrest Erysipelas, and other inflammations of the skin, a ring drawn by a pencil of this substance, moistened with a little water, round the seat of the inflammation, confining it within those circumscribed limits. The *Oxide of Silver* has been much recommended as a sedative and tonic, and used as a remedy for *Dyspepsia*, *Gastrodynia*, *Pyrosis*, &c. (all of which see); also *Uterine Hæmorrhage*, *Hæmoptosis*, and *Chronic Diarrhœa*, especially of children: dose, from $\frac{1}{4}$ to 1-3rd or $\frac{1}{2}$ a grain; if necessary. It may be given in stomach affections two or three times a day; a small dose of Opium may be combined with it in obstinate relaxation of the bowels; if there is Hæmorrhage, the dose may be from $\frac{1}{2}$ to 1 grain, or even more.

Cyanide of Silver. Chiefly sedative and tonic: dose from 1-10th to 1-12th of a grain.

Iodide of Silver. Same as above, and not so likely to discolour the skin: dose $\frac{1}{2}$ to 1 grain.

Chloride of Silver, for Epilepsy; dose 3 grains three or four times a day.

Ammonio-Chloride of Silver. Seldom used, from one-fourteenth of a grain.

Ointments and lotions of all these are occasionally employed, but it is the Nitrate that is most used for external application; the strength of the ointment varies from 1 grain to one drachm in an ounce, and of the lotion from $\frac{1}{4}$ of a grain to 8 scruples in an ounce. Distilled water must always be used for it, or immediate decomposition will ensue; even with that it will do so after a short time if the rays of light are admitted to the bottle which contains it; if the glass is not of a dark colour, some paper should be wrapped round the bottle. For poisoning by nitrate, or other preparation of silver, see *Poisons*.

ARMORACIA. See *Horse-radish*.

ARNICA. Commonly called Leopard's-bane. Botanical name, *Arnica Montana*; natural order, *Asteraceæ*. Many virtues have been ascribed to this plant, more, perhaps, than it really possesses; its principal appears to be that of a nervous stimulant. On the stomach and bowels it acts as an irritant; it is said also to be diuretic, diaphoretic, and emmenagogue. In Germany it is a popular remedy for the ill effects of severe falls, bruises, &c. on the nerves and brain; it is also given in *amaurosis*, *paralysis*, and other nervous affections (which see); also *hydrocephalus*, and *typhus fever*, in the latter stages of which it has

been recommended. It is used externally in lotions for bruises and affections of the brain. Dose of the powdered flowers 5 to 15 grains ; powdered root 10 to 30 grains ; infusion, half an ounce ; extract, 1 to 10 grains ; tincture, 30 drops ; essential oil, 1 to 2 drops.



ARSENIC (Latin *Arsenicum*). This is the metallic base of several salts and oxides and preparations therefrom, used medicinally, all of which are highly poisonous, and should therefore be very cautiously employed or administered. The common White Arsenic of commerce is properly Arsenious Acid (*Acidum Arseniosum*), see *Acids*. In this form Arsenic is not often prescribed by English surgeons: the solution with potash, as in Fowler's solution (*Liquor Potassæ Arsenitis*) being preferred: it is chiefly given in obstinate chronic diseases of the skin, and in intermittent fevers, and other periodic diseases: the doses varying from 5 to 15 minims: it has been said that for the first-named class of disease it is never required in larger doses than 5 minims, given three times a day on a full stomach, the dose to be reduced as soon as the system becomes unduly affected by it; which may be known by itching and redness of the eyelids, swelling of the cheeks and eyes, soreness of the mouth, and a feeling of giddiness; or it may be that there are

gripping pains in the stomach, nausea, if not vomiting, and head-ache; in the latter case it should be discontinued altogether, as it is evidently an unsuitable remedy for the individual. It should never be used internally for persons of plethoric habit, or who have any symptoms of *phthisis*; but to such it may be applied in the form of ointment, so that it may act by absorption: one part of the White Oxide rubbed down with seven parts of Spermaceti Ointment is a good formula.

Orpiment, or yellow arsenic, called in old medical works *auri pigmentum*, golden pigment, is a sesqui-sulphuret of arsenic; it is principally used as a pigment, and is the colouring principal of the paint called "King's yellow." There is also a Red Arsenic called *Realgar*; this is a proto-sulphuret of the metal, it is either *native* dug out of the earth in China, or *factitious* produced by heating orpiment in a subliming vessel.

The symptoms of *Poisoning by Arsenic* are as follow; first comes on faintness and nausea, with a burning pain in the stomach which continues to increase: then follows diarrhœa, cramps in the calves of the legs, incessant vomiting, the matter discharged being brown and turbid, containing mucus and sometimes blood; the retching is violent, there is great heat in the throat, and intense thirst; the pulse becomes faint and irregular, the skin, if not extremely hot, cold and clammy, the respiration laboured and painful, until death ensues, preceded sometimes by coma, or by paralysis, tetanus, convulsions, and spasms of the extremities.

Remedies to be of any use must be given *immediately*, Mustard and Water, or other emetics, the Stomach Pump, Milk, Lime-water, and White of Egg, as much as can be got down; but little confidence, however, can be placed in antidotes; the poison is of so corrosive a nature, that if suffered to remain in the stomach, it will be pretty sure to do irreparable mischief; therefore all the efforts should be directed to getting it out as soon as possible; excite vomiting by all possible means, and throw in diluents. If the treatment should be successful, and the patient appears to be recovering, administer Hydrated Sesquioxide of Iron, if it can be procured; give a spoonful largely diluted with water, every hour or so. See *Iron*.

The facility with which Arsenic could be procured having led to its frequent use as a poison, an act of Parliament was passed a year or two since "To confine and regulate the sale of Poisons:" as it is desirable that

our readers should be fully informed on this head, we give an abstract of that part of it which relates to this metal :—

1. Every person selling Arsenic shall before its delivery enter in a book, to be kept for that purpose, a statement of the quantity of Arsenic thus sold, and the purpose for which it was stated to be required. Also the date and place of sale, and the name, place of abode, and condition or occupation of the purchaser. Such entry to be signed by the purchaser; or if he professes not to be able to write, the seller to affix the words "cannot write."

2. No person to sell Arsenic to another person unknown to him, unless the sale is made in the presence of a third party, who is known to the seller, and who also knows the purchaser. Such third party to sign his name, together with his place of abode. No person to sell Arsenic to any one under full age.

3. Arsenic, when thus sold, to be mixed with Soot or Indigo, in the proportion of one ounce of Soot, or half an ounce of Indigo, at least, to one pound of Arsenic; provided that when it is stated that the Arsenic is wanted for use in agriculture, for which such admixture would render it unfit, it may be sold unmixed, in quantities of not less than ten pounds at one time.

4. Penalty for not complying with the above, upon a summary conviction before two justices of the peace, in England, Ireland, or before two justices of the peace, or a sheriff of Scotland, £20.

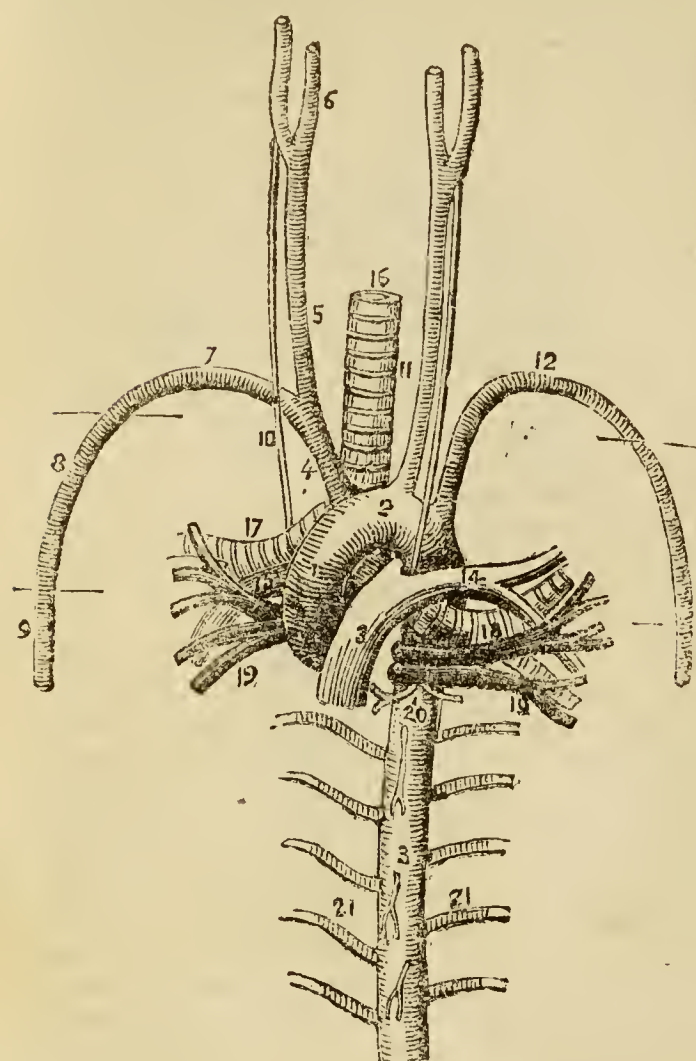
5. This Act not to extend to Arsenic when it forms part of a prescription written by a legally qualified medical practitioner, or in wholesale or retail dealings, upon an order in writing in the regular course of trade.

ARTERIES (Greek *aer*, and *tereo* to keep), vessels which convey the blood from the heart; formerly supposed, from their being found empty after death, to contain only air, hence the above names. The arterial system of the human frame, is that which performs one of the most important functions on which vitality depends; proceeding directly from the heart, and ramifying in every direction, through all the various tissues of the body, it conveys the blood, after it has received a supply of oxygen from the lungs, and been passed into the great organ with which the arteries are connected, wheresoever it is required for the purposes of life. These arteries are membranous cylindrical tubes, composed of three coats, viz., the *external*, which is firm and strong, formed of tissues which take a longitudinal or oblique direction; the *middle* or *contractile*

coat, which is thick and *laminated*, that is, composed of *laminae*, scales or plates arranged in layers; and the *internal* coat which is the thinnest of the three, and is easily broken in a transverse direction. Much might be said about the peculiarities of these several coats, but the above is perhaps sufficient for our purpose; we may just give a summary view of their constituent tissues in the words of the anatomist Wilson.—“In their order of succession from without, it will be seen that the external coat consists of *areolar*, (which see), and elastic tissues; the middle coat of smooth muscular fibre, areolar and elastic tissue, and the internal coat of elastic tissue and *epiphelium*,” (which see). From this we learn that the arteries are so constructed as to be capable of considerable extension, and likewise of bearing a great amount of strain and pressure to which they are occasionally subjected, and which yet results sometimes in a rupture. See *Aneurism*.

The whole of the arteries of what is called the *systemic* circulation, proceed from a single trunk termed the *aorta*, (which see); this main trunk or channel proceeds from the left ventricle of the heart, and contains the pure arterial blood, known by its bright red colour, and issuing, when it makes its escape at any accidental opening, in jets, in accordance with the pulsations. From these the smaller arteries are given off as branches, dividing and subdividing to their ultimate ramifications, constituting the great arterial tree, of some of the principal branches of which, we here present our readers with, a cut, which represents the large vessels at the root of the heart and lungs. It is necessary here to enter into a somewhat minute explanation of the figured points of the diagram. (See over). 1 is the ascending *aorta*; 2 the transverse portion of the arch of the same; 3, its thoracic portion, passing through the chest; 4, the *arteria innominata* springing out of the arch, and divided into the common *carotid*; 5, which again divides at 6, into the external and internal carotid, and 7 the right *subclavian* artery, which passes into the *axillary* artery, 8, whose extent is indicated by the dotted lines; this again runs into the *brachial* artery, which forms the channel of supply to the right arm. The two lines 10 are a pair of nerves called the right and left *pneumogristric*, (see *nerves*); 11 is the left common *carotid*, and 12 the left *subclavian*, becoming *axillary* and *brachial* in its course, like its fellow on the opposite side; all these belong to the greater *systemic circulation*, as do also 21, *intercostal* arteries, and the branches from

the front of the aorta above and below No. 3, which are *pericardine* and *oesophagial*, pertaining to the *pericardium* and the *oeso-*



phagus, (which see,) and abdomen. We now go back on the diagram to No. 3, the trunk of the *pulmonary* artery, which emanating from the right ventricle of the heart conveys the impure blood, returned there by the veins to the lungs for acration. This is the main channel of the *lesser* or *pulmonary* circulation, it is connected with the concavity of the arch of the aorta by a fibrous cord, called the *ductus arteriosus*; 14 is the left pulmonary artery, and 15 the right; 16 the *trachea*, or wind-pipe, the passage which communicates with the lungs, will serve to show the relative positions of these arteries; 17 and 18 are the right and left *bronchus*, and 19 are the *pulmonary veins* (which see); the rest of the numbers indicate the roots of the lungs, (which see).

The arteries do not, as was at one time supposed, run immediately into the veins, but are connected with them by what are called the *capillaries* (which see), a hair-like network of vessels so minute that it requires a microscope to make them out; these are, it is said, about 1-3000th of an

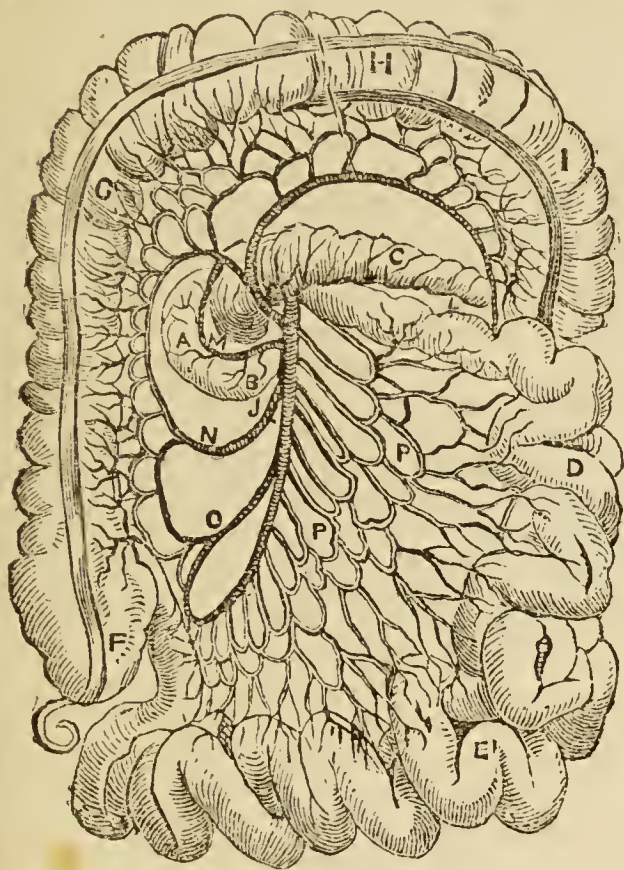
inch in diameter, and they are distributed through every part of the body so thickly as to render it impossible to pass a small needle into the flesh without wounding several of them; hence the flow of blood from a prick; it is through this medium that all the phenomena of nutrition and secretion are performed; they are all small alike, and are joined on the one hand with the terminal ramifications of the arteries, and on the other with the minute radicles of the *Veins*, which see.

The capillary vessels have but one coat, which is transparent and fibreless; as they approach the arteries and veins this coat becomes thicker, and, in accordance with the substance thereof, they are distinguished as *fine* or *coarse*; the latter gradually augmenting in size and complexity of structure become what are called *transitional vessels*. The following cut of a minute artery from the brain will serve to shew its transition



into capillary vessels. 1. Minute artery. 2. Transitional capillary. 3. Coarse capillary, the thick coat being represented by the double lines of contour. 4. Fine capillary. The black marks indicate the position of certain nuclei dispersed over the inner surfaces of capillaries, transitional vessels, arteries and veins, constituting in the two latter the *epithelial* layer of the inner coat (see *epithitium*). The capillaries are most abundant in the lungs, liver, kidneys, and other secreting glands, also in the skin, and mucous membrane; and they are smallest and least abundant in the muscles, nerves, organs of sense, and those tissues where nutrition only is to be accomplished; they

are large in the bones, but not numerous, interweaving, as in many parts they do, into a minute network called a *Plexus* (which see). The extreme beauty of arterial arrangement will be best exhibited by a diagram showing the course, and distribution of the



Superior Mesenteric Artery. A, is the descending portion of the *Duodenum*; B, is a transverse section of the same; C, the *Pancreas*; D, *Jejunum*; E, *Ileum*; F, *Cæcum*, and *Appendix Vermiformis*; G, *Ascending Colon*; H, *Transverse Colon*; I, *Descending Colon*; J, *Superior Mesenteric Artery*; K, *Colica Media*; L, the branch which anastomoses (or joins by little mouths) with the *Colica Sinistra*; M, *Inferior Pancreatic Duodenum*; N, *Colica Dextra*; O, *Ilio Colica*; P, *Vasa Intestini Tenous*. Even the non-professional reader will see at a glance how admirable is the arrangement of the various tissues and organs, around which the arteries wind and ramify, communicating with and supporting each other, and conveying the vital fluid in every direction: truly we are fearfully and wonderfully made.

A particular description of all the several arteries could scarcely be looked for in a work like the present. It has already been seen that they are very numerous, although we have alluded to but few of them comparatively; some of them lie deep amid the internal viscera; others, as the *femoral*, passing down the thigh, the *temporal*, which

traverses the forehead, the *carotid*, in the neck, and the *bronchial*, and other arteries of the arm, which are most likely to be wounded in the act of venesection, come very near to the surface, in some cases protected from injury only by the loose ariolo-fibrous investment which separates all arteries from the surrounding tissues and is called a *sheath*, and the skin: in such positions, it is that the medical practitioner applies to them for information respecting the action of the heart, that great index of the state of the system, whose every beat, or act of forcing out the blood, they record by a distinct *Pulsation* (which see).

Respecting the terms used in connection with this branch of medical science, we may, putting aside the names by which each artery and its branches or subdivisions are distinguished, just explain that *Arteritis* means inflammation of an artery or arteries; — *Arteriotomy*, the opening of an artery, generally the temporal, as in *Apoplexy* (which see). In this operation, when the vessel lies near the surface, it can be punctured at once with the lancet; but sometimes it lies deep among the muscles, and then it is necessary, in the first place, to make an incision in the skin: the bleeding generally stops without any trouble, and a compress and bandage will nearly always effect the object. Should it be found difficult, and the occasional gushing forth of the blood render it probable that too much may be lost, it is best to divide the vessel completely; this facilitates the operations of nature in contracting and closing the ends: an *Aneurism* is sometimes the consequence (which see).

We have already alluded to the method of compressing and tying a lacerated or incised artery under the head of *Accidents*. Alum, Matico, Fungi, and various *Styptics* (which see), are recommended to stop arterial bleeding, but the only thing to be depended on is pressure, firmly and judiciously applied. Surgeons use either a pair of forceps, or what they call a hook-tentaculum, for taking up and tying arteries, which have become torn or severed; the knot tied is that known as the sailor's reef-knot (see *Bandages, Tying*), and the ends of the ligature are not cut off, but left hanging out of the wound; in the sloughing which ensues, previous to the healing of the wound, they loosen and are discharged.

ARTHRON (Greek for a joint) hence *Arthritis*, Gout; *Arthrodia*, a moveable joint in which the motion is slight and limited, as in the articulations of the clavicle, ribs, &c.; *Arthronydia*, pains in the joints;

Arthropyosis, abscess of a joint; *Arthrosis*, articulation or joint.

ARTICULATION (Latin, *articulus*, a joint). The joints or articulations of the human frame are spoken of as MOVEABLE (see *Diarthrosis*), divided into 1st, the Hinge-joint, as that of the Knee (see *Ginglymus*); 2nd, the Ball-and-socket-joint, as that of the Hip (see *Enarthrosis*): IMMOVEABLE, including, 1st, a Seam, dovetailing, or suture, as the bones of the Skull (see *Sutura*); 2nd, Harmony, or close-joining, as of the bones of the Face (see *Harmonia*); 3rd, Nail-like fastening, as of the Teeth in their sockets (see *Gomphosis*): MIXED (see *Amphiarthrosis*) Articulation with Obscure Motion, as that of the Vertebrae.

From the above root comes, also, *Articularis*, relating to joints; particularly applied to the arteries given off from the *Popliteal* (which see).

ARUM MACULATUM. The Spotted Arum, commonly called Wake-Robin, or Cuckoo-Pint, a plant of the natural order *Araceæ*,



formerly called Starch-Wort, because the starch procured from the roots was used for

stiffening ruffs; has large glossy halbert-shaped leaves, with purplish-black spots, and a tall pale green sheath, which opens about May, and displays a column of yellowish-green, with a spike of a brownish-red; these, the country children term "Lords and Ladies;" by about the end of August, a cluster of scarlet berries may be seen to crown the top of the naked stalk, glowing in the sunshine; they look very tempting, but are highly poisonous, as are, also the leaves, and, indeed, every part of the plant, the fresh juice of which is so irritant that it will blister the skin, as will, also, slices of the root; and yet Culpepper, following other old writers on medicinal herbs, recommends the juice as an antidote against poison or the plague. It was at one time employed as a remedy for humoral asthma, chronic rheumatism, jaundice, and visceral obstructions, the dose of the powdered root being from 10 to 30 grains, and of the fresh conserve from 1 to 2 drachms; but few practitioners order it now, the action of even small doses being too violent. A nutritious farina may, however, be obtained from the root by drying it in the sun, powdering, and then repeatedly washing it; it used to be sold under the name of "Portland Sago," much of it being prepared in the Island of Portland, where the plant was very plentiful. A celebrated Parisian cosmetic, called "Cypress Powder," is also made from the Arum root.

The symptoms of poisoning by this plant, are swelling of the tongue, constriction of the muscles of the throat so as to prevent swallowing, tremors, rigidity of the limbs, and sometimes violent convulsions. For remedies, the stomach-pump and emetics, with other means advised to counteract the effects of the vegetable irritants. See *Poisons*.

ARTOS (Greek for bread). The compounds are *arto-kreas*, bread and meat; *arto-gala*, bread and milk; *arto-meli*, bread and honey. The first and second compounds will be alluded to under the head of *Diet, Food*, and the second and third under those of *Cataplasms, Poultices*.

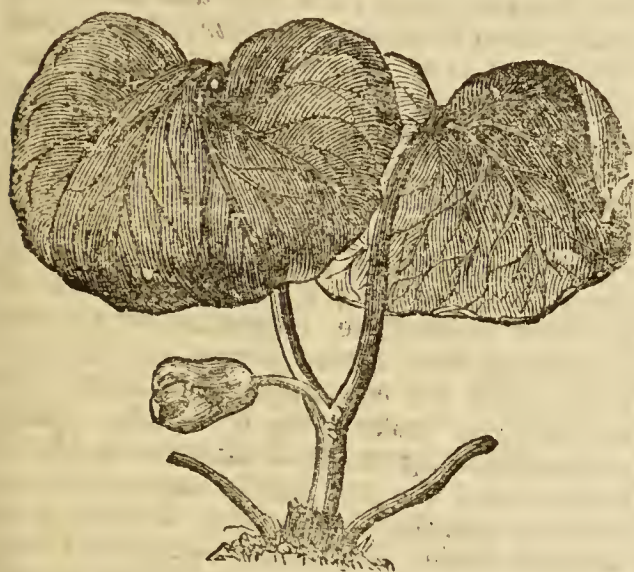
ARUNDA SACCHARIFERA. The Sugar-reed, or Cane, sometimes called by botanists, *Saccharum Officinale*. See *Sugar*.

ARYTÆNOID (from the Greek *arytainā*, an ewer, and *eidos*, likeness). A term applied to the cartilages, muscles, and glands of the *Larynx* (which see).

ARYTÆNOIDENS, is from the same root, and signifies a muscle arising from the root of one of the arytænoid cartilages, and inserted obliquely into the other; by their

united action they open and close the *Glottis* (which see).

ASARABACCA (Latin name, *Asarum Europæum*), belonging to the natural order *Aristolochiaceæ*, grows in the north of England in mountainous woods; has been found in Berkshire, near Maidenhead; blossom, greenish with purple-brown streaks on a short stem, with two grassy-green kidney-shaped leaves; properties, acrid, emetic, and purgative, and sternutatory or provocative of sneezing; but little used now except for the latter purpose, the form of administration being *Pulvis Asari Compositus*. The bitter principle of this plant is called *Asarin*.



The Canada Snake-root, or Wild Ginger (*Asarum Canadensis*), is an aromatic tonic, sometimes administered; dose of the powder, from 20 to 30 grains.

ASCARIS (from the Greek *askarizo*, to jump). Parasitical worms found in various parts of the human body. See *Vermifuges*, *Worms*.

ASCENSUS MORBI (Latin). The increase or ascension of a disease.

ASCIA (Greek for an axe or hatchet). A kind of bandage, so called by Hippocrates on account of its shape. See *Bandages*.

ASCITES (from the Greek *askos*, a sack or bottle). Dropsy of the Abdomen. See *Dropsy*.

ASCLEPIAS TUBEROSA (Swallow-wort.) An American plant, sometimes used as a diaphoretic in catarrh and rheumatism.

ASEPTA (Greek, *a* not, and *sepo* to putrefy). Substances free from the putrefying process.

ASPARAGUS (Latin name, *A. Officinalis*), belonging to the natural order *Liliaceæ*. This common plant needs no description. The parts used are the roots which are strongly diuretic, aperient, and alterative, or deobstruent; their action de-

pending upon the presence of an alkaloid, called *Asparagin*, given chiefly for dropsy,



consumption, and undue action of the heart. Of the decoction of *Asparagus*, the dose is a teacupful three times a-day; of the extract from 20 to 60 grains; of the syrup, from 1 to 4 ounces, in the course of a day; the latter is sometimes given in *Phthisis*.

ASPEN BARK. The bark of the *Populus tremula*, a tree common in this country; it is a valuable bitter, and is said to allay urinary irritation. See *Bitters*, *Tonics*.



ASPIAI (Greek, *a* not, and *saphes* clear) thick or defective utterance. From the same root comes

ASPHATI. A sort of serpego, supposed to

be generated in the pores of the skin. (See *Herpes*, *Ringworm*, *Tetters*).

ASPHYXIA (from the Greek *a* not, and *sphysis* the pulse). Suspended animation. This term was originally applied to interrupted pulse, whatever might be the cause of interruption; but, more recently, it has been held to signify suspended animation from Drowning, or Hanging.

Death from Asphyxia, then, appears to be that condition of the system in which the dark or venous blood, is interrupted in its course towards the lungs, where it would receive a fresh supply of oxygen, which would fit it for circulation through the body. The stoppage of this vital process causes a suspension of all the powers of sensation and voluntary motion. Respiration and pulsation cease, and if within a very short period the proper means of restoration are not employed, all hope of recovery is at an end. See *Drowning*, *Hanging*.

ASPULATHUS CANARIENSIS. Rosewood, called by old writers *Rhodium lignum*. It is commonly used in this country as an ornamental wood; but four ounces of it shaved fine, and macerated in a pint of spirit, forms a warm balsamic cordial, of which from half a drachm to a drachm may be taken as a *Stomachic* (which see).

ASSAFÆTIDA. This drug of an ill savour, is the concrete juice of the *Ferula Assafæ-*

tida, natural order *Umbelliferae*; it is anti-spasmodic, expectorant, stimulant, and slightly laxative; for hysteria, flatulency, nervous debility, hypochondriasis, spasmodic cough, asthma, and other affections of the chest, where there is not active inflammation, it is a valuable remedy; in typhoid fever, cholera, convulsions, and flatulent diseases of children, it is useful as an enema, 2 drachms of the gum being added to about a pint of thin gruel. The *Emplastrum Assafætidae* of the Pharmacopœia makes a good stimulant application to the chest of children with whooping-cough.

The chief officinal preparations into which this gum enters, are *Pilulæ Assafætidae*; *Pil. Aloes et Assaf.*; *Pil. Galbani Comp.*; of either, 10 to 15 grains; *Mistura Assafætidae* $\frac{1}{2}$ an ounce to an ounce; *Tinctura Assafætidae*, a drachm; *Spiritus Ammonia Fœtidus*, $\frac{1}{2}$ a drachm to a drachm.

ASSES' MILK. Chemical analysis has shown that this milk, much recommended for invalids and delicate children, contains more sugar, and a smaller proportion of curd, than the milk of the cow; it is considered one of the best restorative nutrients for persons recovering from severe illness, and is especially good for consumptive patients, and for children brought up by hand. Either of the following artificial substitutes may be taken, when the real article cannot be procured:—Isinglass $\frac{1}{2}$ an ounce, dissolve in a quart of Barley Water, add 1 ounce of Lump Sugar, then mix with a quart of fresh cow's milk, and beat up the whole together until it froths well. Or, take of Pearl Barley, Sago, and Eringo Root of each an ounce, add 2 pints of water, boil to one pint, strain and add 1 ounce of Lump Sugar, then mix with a quart of new milk: either of these should be warmed before taken, by immersing the vessel which contains it in hot water.

ASSIDENT SIGNS (Latin *assideo*, to sit by). Occasional symptoms of disease, which may be observed by one who watches, or sits by the patient.

ASSIMILATION (from the Latin *assimilo*, to assimilate or become like). The conversion of the food into nutriment; this, as far as our knowledge goes, is chiefly effected in the *mesenteric glands* and *liver* (which see); the process appears to be from *albumen* into *fibrine* (which see): also *Chyle*, *Chime*, and *Digestion*.

ASSODES (Greek *ase*, loathing). A continual fever, a prominent characteristic of which is a loathing of food. Some medical writers arrange it under the tertian remittents. See *Fever*.



ASTACUS. In Zoology, a genus of crustaceous animals, some of which are of a star-like form; hence the term is applied to a kind of *Cancer* (which see), whose ramifications spread out like the rays of a star,—in Greek, *aster*.

ASTHENIA (*a*, not, and *sthenos*, strength). Want of power, *Debility* (which see).

ASTHMA (Greek, *asthmazo*, to breathe heavily). This is a disease of the lungs, whose main characteristic is laborious breathing, which comes in paroxysms, and is accompanied by a wheezing noise. The attack commonly occurs in the night, the patient having gone to bed in a listless drowsy state, with a troublesome cough, oppression at the chest, and symptoms of flatulency; towards midnight probably the breathing becomes more laboured, the wheezing sound louder, and the patient is obliged to assume an erect posture, to prevent suffocation. Sometimes he starts out of bed, and rushes to the window for air; or he sits with his body bent forward, his arms resting on his knees, with a flushed or livid face, if it be not deadly pale, gasping and struggling for breath, in a condition painful to behold; the pulse is weak and intermittent, with palpitation of the heart; sometimes there is vomiting, with involuntary emission of the urine, which is of a pale colour, and relaxed bowels. The attack will probably last for a couple of hours or more, when the severe symptoms will gradually remit, with an expectoration of frothy mucus, and a tranquil sleep follows. For some days there will be felt a tightness of the chest, and the slightest exertion brings on a difficulty of breathing; there will be slighter paroxysms, and, after a longer or shorter period, another severe one.

Humid Asthma is that in which the attack terminates with expectoration, when it does not this it is called *Dry Asthma*; persons so afflicted have generally disease of the heart or lungs. When they have not, it is called *Spasmodic Asthma*, and to this persons are sometimes subject who, when the attack is past, may appear quite vigorous and healthy.

The *Causes* of asthma are hereditary predisposition; dwelling in a cold or moist atmosphere, or being subject to sudden changes of temperature; inward gout, intense study, or great mental anxiety; suppression of accustomed evacuations; irritation of the air cells and lungs by atmospheric impurities; irritation of the stomach, uterus, or other viscera.

Treatment. The objects to be attained in this are, first, to moderate the violence of the paroxysms; second, to prevent its re-

currence. Where the patient is of a full habit, not advanced in years, and the disease is of no long standing, bleeding may be resorted to, especially if the face is flushed, and the pulse moderately strong. But this must not be attempted if the disease has become chronic, and the patient is elderly, especially if the face during the attack is preternaturally pale and shrunk. In either case gentle aperients should be administered, and anti-spasmodic mixtures and injections; a blister on the chest will often afford much relief. The following is a good formula for the mixture:—Tincture of Assafoetida and Sulphuric Æther, of each 2 drachms; Tincture of Opium, 1 drachm; Peppermint Water, 6 ounces; mix and take a table-spoonful every hour. If the expectoration is scanty and difficult, add to this, Tincture of Squills, 2 drachms; Wine of Tartarized Antimony, 1 drachm; or make the vehicle, instead of Peppermint Water, Mixture of Ammoniacum, that is about 2 drachms of the gum rubbed down with six ounces of water. The best aperient is Castor Oil, given in Peppermint, or weak Brandy and Water. Where there is reason to suppose the stomach is overloaded, an emetic, composed of 1 grain of Tartarized Antimony, and 1 scruple of Powder of Ipecacuanha, in half a tumbler of warm water should be given. The enema thrown up may consist of 2 drachms of Gum Assafoetida to a pint of thin gruel. Tincture of Lobelia Inflata is good in obstinate cases, dose 1 drachm; and also Tincture of Nicotiana, or Tobacco, in nauseating doses; inhaling the fumes of the leaves of this plant through a pipe, and also of Stramonium, is sometimes of service, and the good effect of either will be assisted by a cup of hot coffee, putting the feet in warm water, or using the warm bath.

To prevent the return of a paroxysm of Asthma, avoid the exciting causes, keep the bowels gently open with Rhubarb or some other mild aperient, and strengthen the tone of the stomach, by bitter infusions, such as Chamomile or Gentian; if there is tightness of the chest, put on a blister, and take an emetic now and then to clear out the phlegm from the bronchial passages; take at bedtime 10 grains of Dover's Powder, or the same of compound Squill Pill, with a little warm gruel. For the rest, take light and nourishing diet, avoiding everything difficult of digestion, wear warm clothing—flannel next the skin—have regular and moderate exercise, change of climate if possible should the situation occupied be damp, or bleak and exposed. Do not indulge in ~~seasonal~~ or intemperate habits.

ASTRAGALUS (from the Greek *astragalos*, a die). The ankle-bone, so called because the analagous bones of some animals were used by the ancients as dice. See *Ankle*.

ASTRINGENTS (Latin *stringo*, to bind). Remedies which act by contracting the animal fibres, and rendering the solids denser and firmer; hence, by causing greater compression of the nervous fibrin, they lessen morbid sensibility or irritability, and thus serve to diminish excessive discharges, such as *Fluxes*, *Hæmorrhages*, *Diarrhæa*, &c. (which see).

The following is an alphabetical list of the chief astringents used, with their respective doses:—

Acid, sulphuric, dilute, dose	10 drops to 1 drachm.
Acid, gallic	5 grs. to 10 grains.
Alum	10 " to 1 scruple.
Ditto, dried	5 " to 1 "
Arsenic, oxide of	1-10 " to $\frac{1}{4}$ grain.
Bistort, root of	10 " to 1 drachm.
Catechu	10 " to 1 scruple.
Copper, sulphate of	$\frac{1}{4}$ " to 5 grains.
Galls	2 " to 10 "
Ditto, tincture of	1 dr. to 2 drs.
Iron, sulphate of	1 grain to 2 grains.
Ditto, filings of	5 grs. to $1\frac{1}{4}$ drms.
Ditto, rust of	2 " to 10 grains.
Ditto, muriated tincture of	10 drops to 20 drops.
Kino, tincture of	10 " to 20 "
Ditto, powder of	10 grs. to $\frac{1}{2}$ drachm.
Lead, superacetate of	$\frac{1}{2}$ grain to 2 grains.
Lime water	2 ozs. to $\frac{1}{2}$ pint.
Logwood	1 scr. to 1 drachm.
Ditto, extract of	10 grs. to 1 "
Pomegranate, flowers and bark	1 ser. to 1 "
Roses, red, the petals of	1 " to 1 "
Ditto, damask	1 " to 1 "
Quicksilver, nitrate of	$\frac{1}{8}$ grain to 2 grains.
Sage, leaves of	10 grs. to 1 drachm.
Simarobar, bark of	1 " to $\frac{1}{2}$ "
Saunders red, the wood	1 " to $\frac{1}{2}$ "
Tanin	5 " to 10 grains.
Tormentil, the root	10 " to 1 drachm.
Wortleberry bears, the leaves	10 " to 1 "

The following may be quoted as good forms of administration and application in most cases where astringents are required: For mixture, take of Muriated Tincture of Iron 2 drachms, Pure Water, or Infusion of Quassia 12 ozs.; 2 table-spoonfuls three times a day. For pills, take Superacetate of Lead 12 grains, Opium 4 grains, Extract of Hemlock or Gentian, as the case may require, 2 scruples, and make into twelve pills; one three times a day, with a draught of Vinegar and Water. For gargle, Infusion of Roses 6 ounces, Alum 1 scruple, Oxymel, or Syrup, 6 drachms. For injection, Oak Bark, bruised, 6 drachms, Water 10 ounces; boil for ten minutes and strain; where there is an

irritable state of the vagina or part to be injected, add to the above a little Linseed Tea or Mucilage. For ointment, Galls in powder 1 drachm, rubbed down with 1 ounce of hog's lard; this, or the Gall ointment of the Pharmacopœia, which has in it Opium, should be used for *Piles* (which see).

The action of *astringents* is sometimes confounded with that of *stimulants* and *tonics*; but there is an obvious distinction; the first, it is true, act by stimulating the parts with which they come in contact, and cause, like the second, sudden contraction of those parts; but this does not extend over the whole frame, nor is it followed by a relaxation corresponding in degree to its intensity; while the third named class of remedies do their duty slowly, and gradually restore the disordered functions to a healthy and vigorous action.

ATAXIA (from the Greek *a*, not, and *taxis*, order). Irregularity, as of the menses, or other periodic discharges; a term applied to some diseases which are called *Atactic*.

ATHAMANTA MEUM. Botanical name for Spignel, a plant once celebrated for its peculiar influence in stimulating the lower viscera, especially the uterus and bladder. The same properties are said to reside in *Madder* (which see).



ATHEROMA (from the Greek *atherha*, pap). An encysted tumour, so called from the pap-like consistence of its contents. See *Tumours*.

ATHYMA (from the Greek *a*, not, and *thymos*, courage.) Lowness of spirits.

ATLAS (from the Greek *tlao*, to sustain).

The uppermost of the Cervical Vertebrae, which supports the head, as the mythological Atlas is said to have done the world. See *Neck, Vertebrae*.

ATMOSPHERE (from the Greek *atmos*, vapour, and *sphaira*, a sphere). The volume of air which surrounds our globe, and so largely affects, by its variations of character and condition, the human constitution. See *Air*.

ATOM (from the Greek *a*, not, and *temno*, to cut). An ultimate particle of matter which cannot be further divided. See *Molecule*. The law of definite proportions in chemical combinations is called the *Atomic Theory*.

ATONIC (from the Greek *a* not, and *tonos*, tone). Deficient in power, or tone, generally applied to a defect of muscular power, which is called *Atonia* or *Atony*.

ATRA BILIS (Latin for Black Bile). A term for melancholy, hence a person of a melancholic temperament is said to be *atrabilarious*. See *Bile*.

ATRESIA (from the Greek *a*, not, and *trao*, to perforate). Imperforation; usually applied to a closed state of the rectum, urethra, &c. See *Anus*.

ATROPA BELLADONNA (Deadly Night-



shade). A poisonous plant of the natural order *Solanaceæ*. See *Belladonna*.

ATROPINE is the active principle of the

above plant, one of those powerful alkaloids for whose discovery and production we have to thank modern chemical science; it is rarely or ever used as an internal remedy. See *Belladonna*.

ATROPHY (Greek *a*, not, and *trophe*, nourishment). Emaciation, loss of strength from defective nutriment.

The *symptoms* are a gradual wasting of the body, loss of appetite, impaired digestion, depression of spirits and general languor; there is usually hectic fever, and often cough and difficulty of breathing. In children of scrofulous habit, who are especially subject to it, there is usually enlargement of the mesenteric glands, indigestion, costiveness or purging, uncertain appetite, flushed or pallid cheeks, loss of strength and spirits, remittent fever, a hard and turgid belly, and emaciated limbs.

The *exciting causes* are excessive evacuations, bad or insufficient food, excessive indulgence in venery or spirituous liquors, worms, unwholesome air, and mental uneasiness. In mothers it is sometimes brought on by continuing to give suck too long.

The *treatment*, of course, must depend very much upon the cause; if there is enlargement and induration of the glands, then their resolution must be attempted by stimulant applications, painting over with Tincture of Iodine, or rubbing in the Ointment of the same; administering tonics to strengthen the system, or absorbents. The following is a good formula.—Iodide of Potassium, 1 drachm; Compound Infusion of Gentian, 6 ounces; Aromatic Spirits of Ammonia, 2 drachms; mix, and take a tablespoonful three times a day, with a gentle alterative aperient at bedtime; say, Compound Rhubarb Pill, 3 grains; Mercurial Pill, 1 grain; every other night; unless there should be constipation of the bowels, in which case take every night.

As general remedies for Atrophy, may be mentioned that class of medicines called *Deobstruents* (which see), Mercurial and Antimonial preparations, Neutral Salts, Steel, Soap, and Hemlock: friction on the abdomen is good, and tepid salt-water baths; Tartrate of Potash, combined with Rhubarb, may be administered as a purgative. If, as is sometimes the case, it arises from a venereal taint, resort must be had to Mercurials and Decoction of Sarsaparilla, change of air and of diet, and abstinence from whatever may have given rise to the disease; we may also mention *Anthelmintics* (which see) where there are worms; *Antiscropholics* (see *Scrofula*) if required.

Atrophy is generally difficult to cure, and often terminates in *Dropsy* (which see). In all cases the patient requires wholesome and nutritious food, and such as is easy of digestion; milk, calves'-feet and other jellies, port-wine, bitters, &c.

ATTENUANTS (Latin, *attenuo*, to make thin). Substances which possess the power of imparting thinness and fluidity to the blood; they may be divided into *Diluents* and *Solvents*. Among the first may be named Barley and Toast Water, and Whey; among the latter, Mercurials, Alkalies, Soap, Nitre, Sal-Ammoniac, Belladonna, Hellebore, Horseradish, Nightshade, and Broom (all of which see).

ATTOLLENS (from the Latin *attollo*, to lift up). A muscle which draws any part upwards.

ATTRAHENS (from the Latin *attrahio*, to draw to). A muscle of the ear.

AUDITORY (from the Latin *audio*, to hear). Belonging to the organ of hearing, as, 1st. A process of the temporal bone; 2nd. Two passages therein, called *Mentus Auditorius*, *Externus* and *Internus* (outer and inner); 3rd. A nerve connected with the *Ear* (which see).

AURA (from the Greek *ao*, to breathe). A vapour; thus we have *A. Epileptica*, a sensation experienced in some cases of *Epilepsy* (which see); and *A. Seminalis*, the supposed fecundating principle of the spermatic fluid. See *Semen*.

AURICULARIS is a name sometimes given to the little finger, because it is commonly applied to the ear to remove any obstruction.

AURICULÆ CORDIS (Latin for auricles of the heart). A term applied to those cavities of the heart which lead to the ventricles. See *Cordis*, *Heart*.

AURIGO (Latin *aurco colore*, gold colour). A term applied to *Jaundice* (which see).

AURI PIGMENTUM (Latin for gold paint). Yellow orpiment. See *Arsenic*.

AURIS (Latin for the *Ear*, which see). Hence *Auricular*, belonging to the ear; *Aurium tonnitus*, a ringing noise in the ear; *Auriscalpum*, an instrument for cleansing the ear; and *aurium sordes*, the wax of the ear.

AURUM (Latin for *Gold*, which see). Hence *A. fulminans*, a precipitate; *A. musivum*, mosaic gold, in reality the Bisulphate of Tin; *Auric Acid*, the peroxide of gold; and *Aurates*, the combination of *auric acid* with *alkalies*.

AURANTIUM, Latin for *Orange* (which see.)

AUSCULTATION (Latin, *auscultare*, to

listen). A term applied to all the methods of determining the nature and conditions of disease by a reference to the sense of hearing. It is, therefore, the science of sound as far as it relates to pathology. The sound may be either artificial or natural, as produced in the internal cavities by the action of the lungs, or other organs; or by percussion from without, and as distinguished by the unassisted ear, or by the aid of instruments. See *Stethoscope*.

Leopold Suenbrug, a Viennese physician, was the first introducer of this means of diagnosis, which he announced in a small Latin work, published in 1761, as an *inventum novum* (new invention). It was not until 1808, when Corvisart, a French surgeon, translated his work, that the practical value of the discovery was recognized. Soon after this, the practice of auscultation became general in France, and spread from thence all over Europe, and, indeed, the whole civilized world: it received an immense impetus in 1816, by Laennec's invention of the Stethoscope, by means of which what is called *mediate auscultation* became practicable. The following is a synopsis of all the important signs recognizable by this method. I. *Natural Sounds*, divided into 1, Sounds having their origin within the chest: again subdivided into *a*, dependent on the motions of the heart, *b*, on the motions of the lungs; *c*, on the action of the vocal organs. 2. Sounds having their origin within the abdomen, subdivided into *a*, resulting from the movements of the intestines containing air; *b*, pulsations of the foetal heart (see *Fœtus*); *c*, movement of the blood in the utero-placental arteries. 3. Sounds having their origin in the arteries. II. *Artificial Sounds*, divided into 1, Those produced by percussion of the surface; subdivided into *a*, those of the chest; *b*, these of the abdomen. 2, Those produced by the friction of the parts of a fractured bone. (See *Crepitation*). 4, Those produced by contact of instruments with *calculi* in the *bladder* (which see): also *Lithotomy*.

A delicate and well-practised ear can detect with great readiness the varieties of sound, often extremely slight, produced on striking the chest or abdomen with the finger or knuckles, by the action of the internal organs, or the passage of wind through the abdominal or other cavities; these sounds come like passengers from the inner world, and reveal many a secret of great import to the listening ear without, enabling the physician to form such a judgment of the state of the organs as to adopt the best means of arresting incipient diseases, or to

greatly alleviate the symptoms of those more advanced. It must be evident, that this useful auxiliary to medical science can only be employed to advantage over some hollow part, that which is fleshy and dense emitting little or no sound on percussion. Indeed, it is only as applied to the great cavities of the *Chest* and *Abdomen* (which see), that it has been found of much service; these containing various organs of different degrees of density, with hollow spaces between, afford peculiar facilities for the transmission and reverberation of sound, which a very slight thickening of a membrane, or roughening of a surface by ulceration, or partial closure of a passage, will alter and modify. It is in these inner chambers, and corridors, and winding galleries, that disease, like a miner, works secretly, sapping the springs of life; and it is only by means of auscultation that its insidious operations are detected.

AUTOPSIA (Greek *autos*, one's self, and *optomai*, to see). A term applied to an examination of a body after death. See *Post Mortem*.

AVENÆ SEMINA. A common grain, the produce of the plant *Avena Sativa*. See *Oats*, *Oatmeal*.



AXILLA (Latin for the armpit). Hence *Axillary*, applied to the arteries, veins, glands, &c. of the *Axilla*.

AXUNGE, or **AXUNGIA**, Latin for hog's lard, and so called because used to grease wheels, from *axe rotarum*, a wheel, and *unguentum*, an ointment; this kind of fat forms the basis of most of the ointments of the Pharmacopœia. See *Adeps*, *Lard*.

AZOTE (from the Greek *a*, not, and *zoe*, life). An elementary gas, forming a constituent part of our atmosphere, and so called because it is, alone, incapable of supporting life; mixed with oxygen it forms Nitric Acid, and is therefore sometimes called *Nitrogen* (which see); in combination with hydrogen it forms *Ammonia* (which see); with carbon and hydrogen it forms *Prussic* or *Hydrocyanic Acid* (which see).

AZYGOS (from the Greek *a*, not, and *zygos*, a yoke). An anatomical term applied to parts which are single, and not in pairs, as many are.

BABLAH. A kind of tannin, prepared from the pods of the *Acacia Arabica* (which see).

BACCA, Latin for *Berry* (which see).

BACK (Latin, *dorsum*). That portion of the human body which extends from the neck to the loins downwards, and includes the dorsal vertebræ, the anterior portions of the ribs, with the muscle and skin which covers them. Pains in the back may proceed from various causes, such as an affection of the *Spine* (which see), or of the *Kidneys* (which see), *Rheumatism* of the muscles, *Lumbago* (which see), or they may be sympathetic; where they occur in females the mischief often lies in the *Uterus* (which see), also *Sprains*.

BACK-BOARDS. It was at one time very customary in seminaries to inflict torture upon children by making them stand for a certain time with the body upright, the head elevated, and the shoulders unnaturally thrown back; they being kept in this position by means of a piece of board, broad and flat in the centre, and rounded and tapering off at either end. This was the back-board, sometimes used as an instrument of punishment, sometimes under the impression that it would correct a tendency to stoop, and promote expansion of the chest and elegance of carriage; it is now pretty well understood that it effects none of these desirable objects, but, on the contrary, does much mischief, causing distortion of the spine by relaxing the muscles which are its chief support. See *Braces*.

BACON. This, we need scarcely inform our readers, is the flesh of the swine salted and dried, and sometimes smoked. As an

article of diet for invalids it is very serviceable in some cases, especially where there is a deficiency of the biliary secretion. (See *Bile*). Very frequently, too, where there is loss of appetite, a delicate slice of bacon will tempt the palate; it is, however, somewhat indigestible, and should not be taken in large quantities, or habitually, by any one: for an invalid, a rasher for breakfast is best; it should not be too lean, and the best way to cook it is by broiling.

BALAUSTINES. The petals of the *Pumea granatum*. See *Pomegranate*.

BALBUTIES (Greek *babazo*, to babble), applied to *Stammering* (which see).

BALDNESS OF THE HEAD. This may result either from age or disease, although, in the former case, the age may greatly vary in different individuals, some becoming bald before they arrive at the middle period of life. This kind of baldness, like the change of colour in the hair, may often be observed to run in families, and to be, as it were, constitutional, and nothing can be done to check it; the commencement is always from the crown of the head, leaving a bare shining spot, which spreads with greater or less rapidity over the whole scalp, rendering, in some cases, a wig absolutely necessary; whereas if the baldness proceeds from disease, it may commence at the top, back, or sides, and at several places at once. See *Hair, Skin*.

BALENUM (Greek *balaneion*, a bath). See *Bathing, Baths*.

BALL AND SOCKET. A moveable joint or articulation, as that of the *Hip* (which see), and *Enarthrosis*.

BALLOTA. A Siberian plant generally called the Woolly Ballota (*Ballota lanata*), of the natural order *Labiatae*; it is a sudorific and diuretic, and is given in gout, rheumatism, and dropsy, in the form of a decoction of the dried leaves and stalks.

BALLOTTEMENT (French). A term applied to the falling back of the fetus in the womb after it has been rest by the hand, and made to float in the *Liquor amnii*. See *Fetus*.

BALUSIMUS (Greek *ballizo*, to trip or caper), a term generally applied to those forms of palsy which are attended with fits of leaping and dancing. See *Palsy*.

BAKER'S ITCH (Latin, *psoriasis pistoria*). This is the vulgar name for a species of scale, or scab, occurring on the back of the hand, to which bakers are especially liable; it is sometimes difficult to cure, but may generally be got rid of by cleanliness and attention. *Treatment*.—Sulphur, or Zinc Ointment rubbed in every night. Milk of

Sulphur and Super-tartrate of Potash, in the proportion of 1 drachm of the latter, taken every morning in milk, or treacle, the dose being about a teaspoonful.

BALM, or BALM MINT (*Melissa officinalis*). A plant of balsamic odour, the leaves of which are used as a diluent in *Fevers* (which see). It belongs to the natural order *Labiatae*, and has, like Thyme and Marjoram, stimulant and carminative properties, which render it valuable as a remedial agent. Dr. Copeland recommends it, infused with Liquorice-root and Seeds of Anise, Fennel, and Coriander; $2\frac{1}{2}$ drachms each of the Balm and Liquorice, and $\frac{1}{2}$ a drachm each of the Seeds, to two pints of Water. Dose from 1 to 2 ounces. See *Carminatives, Mints*.



BALSAM (Latin *balsamum*). An unctuous, aromatic, healing substance, being the resinous extract, or juice, of several plants: it may be, 1st, *Semifluid*, as the Balsams of Peru and Tolu; the first being the produce of the *Myroxylon Peruiferum*, and the second of the *Myrosperinum Toluiferum*; both, if they be distinct species, about which there is some doubt, plants of the natural order *Leguminosae*. 2nd, *Solid*, such as Storax and Benzoin; both of which will be described under their proper alphabetical heads. The plants producing these belong to the natural order *Styraceae*. The true test of a balsam is its capability of yielding *Benzoic Acid* (which see); but there are so-called balsams which do not this, such as Balsam, or Balm, of Gilead, or Mecca, the plant that produces which is called *Amyridis Gileadensis*, of the order *Amyrideae*; and Balsam of Copaiva, the produce of *Copaifera officinalis* and other species, of

the order *Leguminosæ*; these are both properly *Turpentine*s (which see, also *Copaiba* and *Gilead*, *Balm of*), as is the Canada Balsam—much used as a varnish, but little, if at all, as a medicine. Friar's Balsam is the Compound Tincture of *Benzoin* (which see); and Balsam of Sulphur is a solution, in *Volatile Oils*, of *Sulphur* (which see).

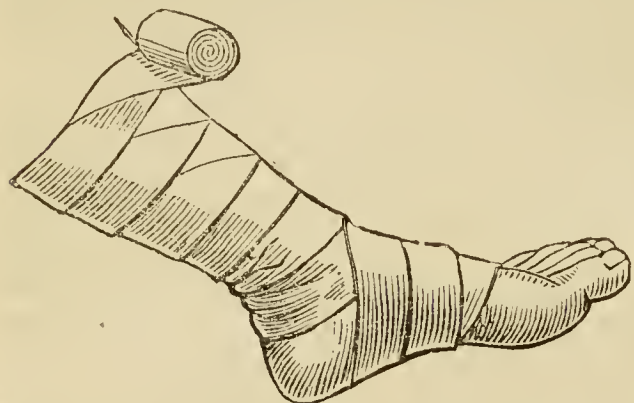
Having thus cleared the ground, as it were, of the pretenders to the name, we will return to the true *Balsams*, and first speak of that of *Peru*, which is a good expectorant and stimulant, acting especially upon the mucous membrane, hence it is useful in non-inflammatory affections of the chest, chronic catarrhs and bronchitis, with debility; it is useful also in *chronic rheumatism*, *leucorrhœa*, *gonorrhœa*, and *amenorrhœa* (all of which see), and has been given with advantage in nervous diseases. Dose, from 5 or 10 grains to a drachm, in Mucilage, or made into pills with Liquorice Powder, three or four times a day. Externally, it is applied to wounds and ulcerated surfaces; and where there is a constant foetid discharge from the ear, it may be mixed with three times its quantity of Ox Gall, and occasionally dropped in, the ear being previously syringed with soap and water. This balsam is a viscid liquid of a reddish brown colour, fragrant and aromatic smell, and hot and bitter taste; that of Tolu is of a much paler tint, generally as light as straw, and although fluid at first is seldom or ever sold in that state, as it soon becomes concrete: it has a peculiar and agreeable fragrance, and a warm sweetish taste; if dissolved in a solution of potash, the odour which it emits has a faint resemblance to that of the clove pink; its medical properties are stimulant and expectorant. It is good in asthma, chronic coughs, gleet, &c., although, on account of its highly stimulating nature, it should be cautiously used; its officinal preparations are the Compound Tinctures of Benzoin, and Balsam of Tolu (the latter is found only in the Edinburgh Pharmacopœia), and Syrup of Tolu, a favourite and pleasant remedy for coughs in children. Dose,—Half a drachm to a drachm. It is often combined with Oil of Almonds, which greatly assists in allaying irritation of the mucous membrane (see *Expectorants*, *Coughs*). There is also a Tolu Lozenge, good for both adults and children; it may be prepared as follows:—Lump Sugar, 8 ounces; Cream of Tartar, 1 ounce; Starch and Gum Tragacanth, of each in powder 2 drachms; put together in a pipkin, or glazed iron saucepan, and add 4 ounces of water; let the whole simmer

together for half an hour or more, stirring occasionally, then add Tincture of Balsam of Tolu, or Peru, 2 drachms; mix well; pour out in a well-greased shallow vessel, and set aside to cool. Either of these balsams may be suspended in water by means of mucilage, or the yolk of an egg, and so exhibited. The doses are from 10 to 40 grains.

BAMBALIA (Greek *bambaino*, to lisp or stammer). This is a kind of St. Vitus' Dance, in which only the organs of speech are affected; its varieties are *Hesitation*, and *Stammering or Stuttering* (which see).

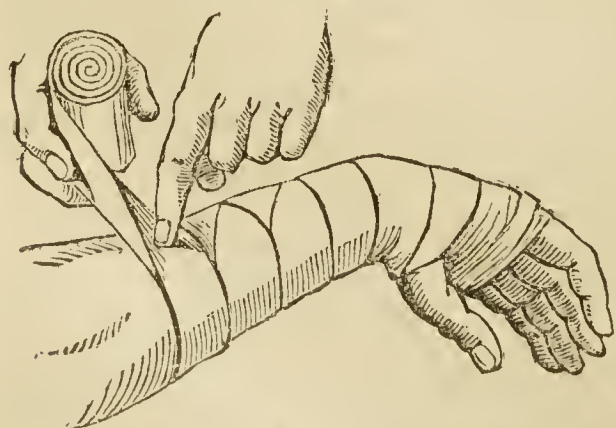
BANDAGES. There is not a more important art connected with household surgery than that of bandaging. To do it well requires much practice and no little judgment; even hospital dressers are not always perfect in this branch of their operations; and we have known "family doctors" make a sad bungle of bandaging a leg or an arm; on the other hand, we have seen it so deftly performed, that no piece of machinery work could excel it; so smooth and regular, so compact and firm, every fold and diagonal turn falling into its exact place, and maintaining its proper relative position; each layer of even texture fading off, as it were, from its fellow, and in turn supporting another, with no undue strain nor pressure on any part: the very perfection of close binding. We do not expect many of our readers to accomplish this; but it will be as well for them to understand *how* it is done, that they may, when the emergency arises, know how to go about it. First of all, let us ask what is a bandage? Something that binds, a fillet, a piece of linen or cloth for binding up a wounded limb. The material employed for this purpose is usually stout unbleached calico, from two or three to nine or ten inches wide, and from six to twelve yards long; the former length and breadth will do best for the leg. If commenced at the ball of the foot, and evenly applied so that each fold overlaps the other about one-third, it will reach to the knee; the following cut will best show the mode of application. The bandage having been first tightly rolled up, is taken in the right hand of the operator; the end is passed under the foot, and held there by the left hand until it is secured by one turn of the bandage over it; an upward direction is then taken, so that a couple of folds bring the bandage up to the front of the leg, over the instep; the next turn will naturally pass above the heel behind; and then, if proper care be observed, it will go on fold above fold, each overlapping the other slightly, all up the leg; the

bandage is passed from the right to the left hand each time that it goes round the leg, and great care should be taken to hold it firmly, and equalize the pressure, as well as to smooth out any wrinkles that may occur in the process of binding. A firm and even



support is thus afforded to the limb, which is not likely to crease, or get displaced by the motion which may be afterwards necessary; it may be made fast above the calf by a couple of pins, or a needle and thread. Great care should be taken in this, as in all similar operations, to get the bandage rolled up *tightly* and *smoothly*, before commencing, it may thus be grasped in the hand, and kept well under the command of the operator, who should on no account let go his hold of the bandage, so as to relax the pressure.

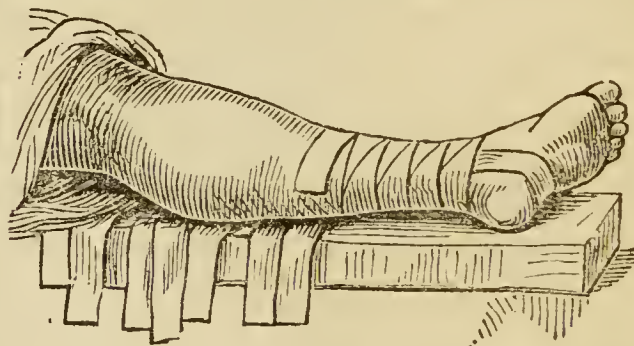
The arm does not require so long or broad a bandage as the leg; about two inches, by three or four yards, being the average size: this limb is rather more difficult to manage, half turns being necessary to effect a proper envelopment. How this is effected may be seen by the following cut; the bandage is folded back upon itself, so as to take a different direction, and cover the space which would be left exposed by the ordinary method of folding; these half turns, unless they are done tightly and evenly, will be very apt to slip and derange the whole binding. Some operators avoid half turns, by letting the roller take its natural course, and, then



coming back to cover the exposed parts;

but this method, besides requiring a larger bandage, does not effect the required purpose so neatly and efficiently. One mode of fastening a bandage is to split it up a short distance, so as to leave two ends, which can be passed round the limb, and tied. It should always be borne in mind that the chief art in applying bandages is to give firm and uniform support, without undue pressure upon any part; and to effect this properly, the strain in winding should be upon the whole roll held in the hand, and not upon the unrolled portion of it; and this strain should not be relaxed during the progress of the operation.

The next cut represents the mode of applying what is called a many-tailed bandage, useful to apply over a wound, or where ever it requires frequent changing, or in cases in which it is desirable not to exhaust the patient by much movement of the limb. This is a strip of calico somewhat longer than the limb to be enveloped; on it are sewn, at right angles, other strips, about one half longer than the circumference of the limb, each overlapping the other about one



third of its breadth, so that when drawn tightly over in regular succession, each secures the other, the end of the strip passes under the heel, and coming up on the other side, is made fast to the bandage there, and so all is kept firm.

For keeping poultices on the lower part of the back, or in the groin, a cross bandage is used, the fashion of which is this: make a calico band large enough to pass round the loins, and tie a buckle in front; to this is attached another piece, which proceeds from the centre of the back to the anus, where it divides into two, which pass under the thighs, up on either side, and are fastened to the band in front. The bandage used to close a vein after bleeding is commonly called a figure of eight; it will be more fully described under *Bleeding, Venesection*.

For a sprained ankle, place the end of the bandage upon the instep, then carry it round, and bring it over the same part again, and from thence round the foot two or

three times, finishing off with a turn or two round the leg above the ankle.

For a sprained wrist begin by passing the bandage round the hand, across and across, like the figure 8; exclude the thumb, and finish with a turn or two round the wrist.

For a cut finger, pass the bandage, a narrow one, round the finger several times, winding from the top, and splitting the end, fasten by tying round the thick part above the cut; or if it be high up, tie round the wrist.

The best bandage for the eyes is an old silk handkerchief passed over the forehead, and tied at the back of the head. For the head itself, it is best to have a cross bandage, or rather two bandages; one passing across the forehead, and round the back of the head, and the other over the top of the head, and below the chin, as in the following cut. Or, better than this is, perhaps, a

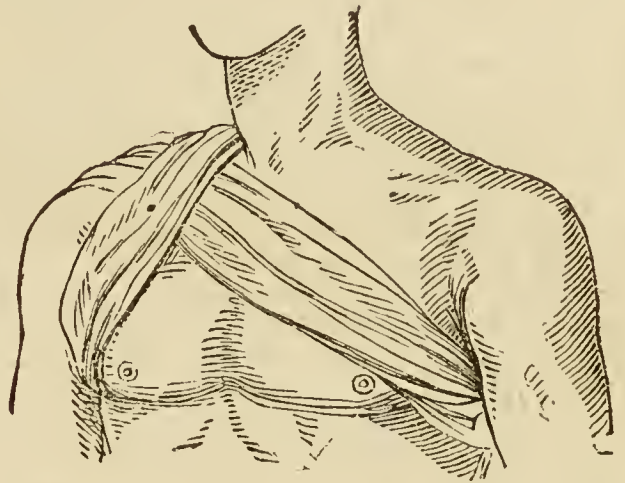


large handkerchief which will extend all over the forehead and crown, two ends of



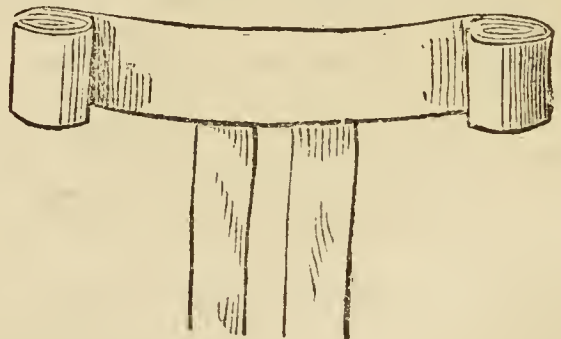
it passing to the back, and after crossing from thence round the neck, then tying the other two beneath the chin.

For a bandage to support a pad or poultice under the arm-pit, a handkerchief may be used, put on as in the following cut; or a broad piece of calico, arranged in the same way.



For fracture of the ribs, bandages should be about nine inches wide, and drawn round the body very tightly; in this case, as in that of any other fracture or dislocation, only a properly qualified person should attempt their application. See *Dislocations, Fractures, Slings*.

We have not yet spoken of the T bandage, which is simply a broad band to pass round the body or elsewhere, having attached to it one of the same width, or narrower, like the upright part of the letter after which it is named; or, there may be two stems, if they can be so called, in which case it is a double T bandage, as under.



Suspensory bandages, and elastic supports for pregnant women and obese persons, and other contrivances for spinal cases, will be spoken of elsewhere. See *Elastic Belts, and Stockings, Suspensories, Trusses, &c.*

Starch bandages are those in which the roller, before it is put on, is saturated in a strong solution of starch. Sometimes a covering of brown paper is put over this, and another dry bandage is applied; this makes a firm and compact case for the limb;

it is useful in cases of fracture, especially if the patient has to be removed to a distance. Sometimes, when it is not desirable to make the covering so thick and durable, the displacement of the bandages is guarded against by brushing a weak solution of starch or gum over the folds.

Bandaging should be performed in nearly all cases from the extremities upwards, or inwards to the heart, except where the injury is situated above the seat of vital action. If they give much pain there is reason to suspect inflammatory swelling beneath, and they should be loosened, if moistening with cold water does not relieve the pain. Flannel for bandages is used where warmth as well as support is required.

BANDY LEGS. This term is usually applied to crooked or distorted legs, which may be so from birth, or have become so from neglect, or injudicious treatment. When children are suffered to walk or stand much before their legs are strong enough to support them, they are very apt to become deformed. Go-carts, and other absurd contrivances for early walking, are prolific causes of these distortions, which, if taken in time, can commonly be remedied, although they seldom can after the child has attained the sixth or seventh year. Daily rubbing on the convex side of the legs, and a judicious use of the bandage, are the best means of cure, together with salt-water bathing, tonics, and good nourishing diet. A pair of light irons may sometimes be used with advantage, but these should be skillfully made; if too clumsy and weighty they will do more harm than good. Above all, patience and perseverance, on the part of those who attend to the patient, are required. With females, bandy legs are more serious deformities than with males, as they are frequently connected with malformations of the pelvis, and other bones which enclose the uterus, and so interfere with the formation, growth, or delivery of the fœtus.

BANOS DE TIERRA (an Earth Bath). A continental remedy for certain diseases, introduced by a once celebrated physician named Solano de Lagne. It consists in burying the patient up to his neck in fresh mould. It is seldom, or ever, practised in this country.

BARBADOES TAR. This is a natural naphtha found in the island from which it takes its name, and some other places within the tropics. The natives of the parts where it is produced use it as a sordific in disorders of the chest and lungs; the dose is from 10 to 30 drops; they likewise apply it as a dis-

cutient, and as a preventive against paralytic disorders. See *Naphtha, Tar*.

BARBADOES LEG. See *Elephantiasis*.

BARBAROSSA'S PILL (*Barbarossæ Pilulæ*). This is an old formula consisting of quick-silver and rhubarb; it was the first internal mercurial medicine which obtained use and credit. See *Mercury*.

BARBERY OR PEPPERIDGE PLANT. *Berberis Vulgaris*, natural order, *Berberidaceæ*.



Barberries or Berberries have come much into use lately for making tarts and pies; they are a pleasant acidulous fruit, and may be eaten with safety; they are cooling, antiscorbutic, and deobstruent, containing *malic* and *citric acids*, (which see); hence they are useful medicinally in fevers, bilious disorders and *Scurvy* (which see).

The bark of the root of this plant is tonic and deobstruent; it is chiefly used as a remedy for *jaundice* and *dysentery*, (which see.) The dose of the infusion is from 1 ounce to 2 ounces twice a day.

The active principle of the bark, called *Berberine*, is also tonic, and, in large doses, laxative; it has been found useful in dyspepsia, with functional derangement of the liver; dose 4 to 10 grains; if more is given it acts as a purgative.

BAREGES WATERS. Are said to be peculiarly efficacious in the reduction of tumours; in indigestion, accompanied by heart burn; in jaundice and obstinate colic. The temperature varies from 73 to 120; they rise from several springs in the neighbourhood of the French town from which they are named, and are much like those of Aix. See *Mineral Waters*.

BARCLAY'S ANTIBILIOUS PILLS. These pills have attained considerable reputation

as a patent medicine; they are commonly sold in boxes at 1½d. and 2s. 9d. The following is the formula of preparation:—Extract of Colocynth, 2 drachms; Extract of Jalap, 1 drachm; Almond Soap, 1½ drachms; Gum Guaicum, 3 drachms; Tartarized Antimony, 8 grains; Oil of Juniper, Caraway and Rosemary, of each, 4 drops; Syrup of Buckthorn sufficient to form a mass, which divide into 5-grain pills, and take two when required.

BARK. There are many kinds of bark used in medicine, but that which is generally so designated is the Peruvian or Jesuits' Bark, in Latin *Cinchona*, whose tonic and febrifuge properties have long been known and highly valued: it is obtained from several species of plants belonging to the natural order *Cinchonaceæ*, found chiefly in South America. There seems to be some doubt as to which of these particular species yields the barks of commerce and medicine. Linnæus confounded at least four of them under the trivial name *C. officinalis*, and botanists are now by no means agreed as to specific identity. This is, however, of little consequence as far as our purpose is concerned. The following cut will serve to give our readers an idea of the general characteristics of these plants; it represents the *Cinchona Cardaminica*.



The medicinal barks are generally dis-

tinguished as 1st, *pale*; 2nd, *yellow*; 3rd, *red*; the first, in reference to the plant, being the lance-leaved; the second the heart-leaved; and the third the oblong-leaved *Cinchona* Bark: the first is also called Crown Bark, its varieties are the Quilled and Grey Barks of Loxa, and those of Lima and Havannah; the varieties of the third kind are the smooth or Quina Rota, and the Warty, of Santa Fe. These kinds differ considerably in appearance; the quilled is in long pieces rolled up small, something like cinnamon; it is of a pale yellow or ashy colour, and breaks short with a clean fracture. The other two kinds are larger and coarser in appearance; the red is especially so; but they do not differ essentially in their qualities, although they do somewhat in intensity of flavour; the yellow is the most bitter, although less austere and astringent than the red, which is more nauseous than either of the other kinds.

Being powerfully tonic and antiseptic, Bark was first introduced into medical practice for the cure of intermittent fevers, but it has since been largely employed in general and nervous debility, fever, if of the typhoid kind, and gangrene. It has also been recommended for gout and acute rheumatism; during its exhibition, in such cases, great attention should be paid to the state of the bowels, purgatives being occasionally interposed.

The great objection to the use of powdered Bark is the quantity required to be taken, the dose ranging from 10 grains to 2 drachms two or three times a-day: milk is a good vehicle for it. Of the Infusion or Decoction, from 1 to 4 ounces is the dose: where it is desirable to combine cordials, the powder may be taken in Port Wine, or an infusion of the Bark may be made by pouring a pint of this wine, previously heated, over 1 ounce of the bruised Bark, and taking a wineglassful two or three times a-day.

Besides the Decoction, Infusion, and Powder, the following are forms of administering Bark:—Extract, and Resinous Extract, dose, 10 to 30 grains; Simple, Compound, and Ammoniated Tinctures, dose, of either, 1 to 4 drachms. There is also a Syrup and a Wine of Bark; and, for outward use, a Cerate, an Ointment, an Anaseptic Cataplasm, and a Powder of Bark with Myrrh. indeed, the combinations into which this useful ingredient enters are almost infinite. Where there is great irritability of stomach, Battley's *Liquor Cinchonæ* is, perhaps, the best form of administration; it may be obtained of any druggist, with full directions for use.

Bark is subject to extensive adulteration; the better are not only mixed with the inferior kinds, but frequently with those from which the active ingredients have been extracted by decoction or infusion: the quill, being that which fetches the highest price, the bark-gatherers sometimes call in the aid of artificial heat to give it that form, but by this process the quality is deteriorated; it may generally be known when this fraud has been perpetrated, by the darker colour of the bark, and by its exhibiting, when split, stripes of a pallid hue in the middle. When Bark is of a dusky colour, between a yellow and a red, it is either a bad species, or has been badly preserved. If perfectly good, it will be dense, heavy, and dry, with no smell of must, but a slight and very peculiar odour; the taste bitter, with a slight acidity, neither nauseous nor very astringent: if chewed, the fibres should not be of great length, nor stringy. But it is in the form of powder that Bark is most likely to be adulterated; all sorts of woody fibres are ground up and mixed with it, and the requisite colour is given with red and yellow ochre. Such adulterations it is almost impossible to detect. Willow and other Barks have been recommended as substitutes for the Cinchona, and these will be spoken of under the proper heads.

Since the introduction of the alkaloids *Quina* and *Cinchona*, in which the active principles of Bark reside, the Bark itself has fallen into comparative disuse, although some of the officinal preparations are yet frequently ordered by medical practitioners. Of *Quina* and its salts we shall speak elsewhere. See *Quinine*.

BARLEY (Latin, *hordei semina*). The seed of the *Hordeum distichum*, a well-known cereal plant. In its prepared state of Pearl Barley (*Hordeum perlatum*), it is a most useful adjunct to the medical practitioner; its decoction, commonly called Barley Water, is an agreeable and efficacious demulcent in affections of the mucous membrane, and a grateful and nutritious beverage in fevers; for the former purpose it is required much thicker than for the latter. The following is a good recipe for making plain Barley Water: Take $2\frac{1}{2}$ ounces of Pearl Barley, wash it, and boil for a short time in half a pint of water, which pour off and throw away; then pour in four pints of hot water, boil down to two pints, and strain: this is an excellent diluent drink in fevers; it is very soothing for inflamed mucous surfaces, especially those of the urinary organs; it may be rendered more pleasant and useful

as a fever drink, by the addition of a few slices of lemon. If a laxative is required, the compound decoction, prepared as follows, may be given: Sliced Figs and Stoned Raisins of each $2\frac{1}{2}$ ounces; Bruised Liquorice Root 4 drachms; Water 1 pint; Barley Water, as above, 2 pints; boil down to a quart and strain. The demulcent properties



of either of the above formulas may be increased by the addition of an ounce of Gum Arabic to each pint of the liquor. As a food for infants brought up by hand, simple Barley Water and Milk, equal proportions, sweetened with a little refined sugar, has been recommended; care should be taken to stop it, if the bowels should become relaxed with this diet. *Gruel*, for children, may be made of the Pearl Barley, or Robinson's Prepared Groats; for most, however, this diet, as a continuance, will be found too heating.

A *Barley Pudding*, good for invalids, may be made as follows: Add to 4 table spoonful of Prepared Barley sufficient cold milk to form a thin paste, pour on it a quart of boiling milk, then add a small slice of butter, a tablespoonful of powdered lump sugar, sufficient lemon peel to flavour it, and two eggs, previously well beaten up; mix well, and let the whole bake for an hour and a half in a slow oven. This is very nutri-

tious and easy of digestion ; it may be rendered more palatable to some by the addition of a slice or two of lemon. See *Diet*.

BIARIUM or **BIARYTA**. The former is the metallic base of the latter, which is a native earth, extremely ponderous, and a strong poison ; the name comes from the Greek root *baros*, heavy. All the preparations of this earth are poisonous, and require caution in their employment ; they are given as alteratives and deobstruents, in scrofulous and other diseases, which affect the skin, also in cancers. The Chloride of Barium, *Barii Chloridum*, formerly called *Baryta Murius*, is the preparation most used ; the dose is from 1 to 2 grains at first, gradually increasing to 5 grains. Of the *Liquor Barii Chloridi* from 5 to 15 minims is given, and of the *Barii Sodidum*, and *Barii Iodidum*, from 1 to 3 or 4 grains. For an overdose of either of these forms, give in the first instance, Sulphate of Magnesia, or Carbonate of Soda, in solution, and follow it by frequent doses of dilute Sulphuric Acid in water. See *Poisons*.

BAROMETER (Greek, *baros* weight, and *metron* a measure). An instrument invented by an Italian named Torricelli, to determine the variations of the atmosphere by the expansion and contraction of mercury in a glass tube. See *Atmosphere*.

BARRENNESS. Defect of power in the female to produce offspring. This may be the result of malformation of structure in some part of the generative organs, or of functional disorders, which may result from local or constitutional causes. There are many popular remedies for this defect, some of them miraculous ; but only the ignorant and superstitious will resort to them. None but a qualified practitioner should attempt medical treatment in a case of this kind.

BARRY'S EXTRACTS. These were the first vegetable extracts prepared in what is called *vacuo*, the evaporation being carried on in a vacuum, caused by admitting steam into the apparatus, which resembled a retort with its receiver, the liquor to be evaporated was contained in a polished iron bowl. The extracts prepared in this way are generally green, and saline particles of a glittering appearance may be observed in them. Being prepared in a lower temperature than that of the ordinary method, they are thought to possess the virtues of the plants from which they come in greater perfection. The apparatus for making them has been much improved since its invention by Barry.

BARYPHONIA (Greek, *baros* heavy, and *phone* voice). Heaviness of voice, or difficulty of speaking. See *Huskiness, Voice*.

BASCULATION (French, *basculer*). A term used in examinations of the uterus in retroversion ; it expresses half of what is called the *see-saw* motion, and is effected by pressing the fundus upwards, and drawing the cervix downwards.

BASILAR (Greek *basis*, a base). A term applied to an artery of the brain, to a process of the occipital bone, and to several *Bones* (which see).

BASILICAR (Greek *basilikos*, royal). A term applied to the large vein of the *Arm* (which see). The Basilic Vein is that most frequently opened in the operation of *Bleeding* (which see).

BASILICON OINTMENT, or *Yellow Basilicon*. This ointment was at one time of almost universal application, and is still a very popular dressing for cuts, abscesses, and local affections of any kind. See *Ointments, Resin, &c.*

BASILICUS PULVIS, or *Royal Powder*. A preparation of Calomel, Rhubarb, and Jalap, at one time much used, but now seldom heard of under this name, although a combination of these ingredients is not uncommonly administered, in cases where strong purgatives are required.

BASIS CORDIS, Latin for the base of the heart, the broad part of which is thus called, to distinguish it from the apex, or point. See *Heart*.

BATH WATERS. Every one knows that the city of Bath is renowned for its mineral waters, which are used both for bathing and drinking ; in this city are the only hot springs which England possesses. Persons afflicted with gout, rheumatism, paralysis, liver and stomach complaints, resort to these springs, and very many find benefit from them. Those debilitated from a long residence in hot climates, from indulgence in excesses of various kinds, go to Bath, and enter those vestibules to the temple of Egeria, the pump rooms and baths ; and if they do not always come forth renovated and restored, they seldom or ever fail to experience some beneficial results from the tonic and purifying properties of the waters, one pint of which contains about 15 grains of solid matter, consisting of Murates of Lime and Magnesia, Sulphates of Lime and Soda, Silix, and Oxide of Iron. There is also a small portion of Carbonic Acid Gas, which causes the waters to sparkle and effervesce when first drawn, and gives a briskness and freshness to the taste, which renders them rather pleasant than otherwise. If not drunk directly, they become dull and vapid, and are then very unpleasant. See *Mineral Waters*.

BATHING—BATHS (Greek *balaneion*). By Bathing, we understand the whole or partial immersion of the body in any medium other than atmospheric air; it may be Milk or Oil, or Medicated Vapour, Salt or Fresh Water, Hot, Tepid, or Cold, as may be required; and we commonly understand Water to be meant when no other medium is expressed. As regards the mode of application, it may be total immersion of the body by Plunging or Dipping, by Shower, Vapour, Cold Affusion, Douche, Sponge, or Wet Sheet; to all of which methods we shall presently refer.

The object of Bathing, besides its great main object, bodily comfort and cleanliness, is to act upon the system through the skin, whose nervous irritability, sympathetic power, and extreme vascularity, and important functions as an excreting organ, admirably adapt it for absorbing and conveying through the whole system whatever may be brought into contact with it. On this subject we have already spoken under the head *Ablution*, and more will be said when we come to treat of the *Skin* (which see).

Bathing, as a means of promoting health and comfort, has in all ages been valued and practised in warm, and especially Eastern climes, as a source of voluptuous enjoyment, to a pernicious extent, on account of the enervating influence of the hot bath universally employed. In temperate climates cold bathing is more practised by those in health, and its effect is altogether beneficial when due moderation is observed, and proper times and seasons. The temperature of the cold bath may range from 40 or 50° up to 80 or 85° Fahrenheit; its effect upon the system varies in accordance therewith, as well as with the nervous energy of the bather, with the length of time he is subjected to its influence, and with the muscular action he exerts during that time. As a rule, ten or twelve minutes is as long as a person should remain in the water at one time, and but one bath should be taken during the day. The best part of the day is the morning before breakfast, especially for a strong vigorous swimmer; but one of weak and nervous temperament will do best to go in about noontide; with such a bather a change of the hour will make all the difference between agreement and disagreement. If he comes out of the water with fingers and lips blue, and countenance pale, and instead of the pleasant glow which ought to follow a bath, feels cold, languid and drowsy, and if a change of the hour does not mitigate or alter these symptoms of depression, he must give up the

cold, and resort to the tepid bath, until the vigour of his constitution is in some degree restored. It is always dangerous to bathe after a full meal, or when exhausted by great bodily or mental exertion, and especially so when heated by running or other exercise; on the other hand, it is not well to immerse the body when it is in a chilled state, in this case reaction is doubtful, and the consequences may be bad. Even in cold climates, a plunge into icy water may be taken with safety by those in full health and vigour; it will not have so depressing an effect upon the system as remaining long in a bath of a higher temperature, especially if friction with some coarse material be used directly after—this should always be done after a cold bath.

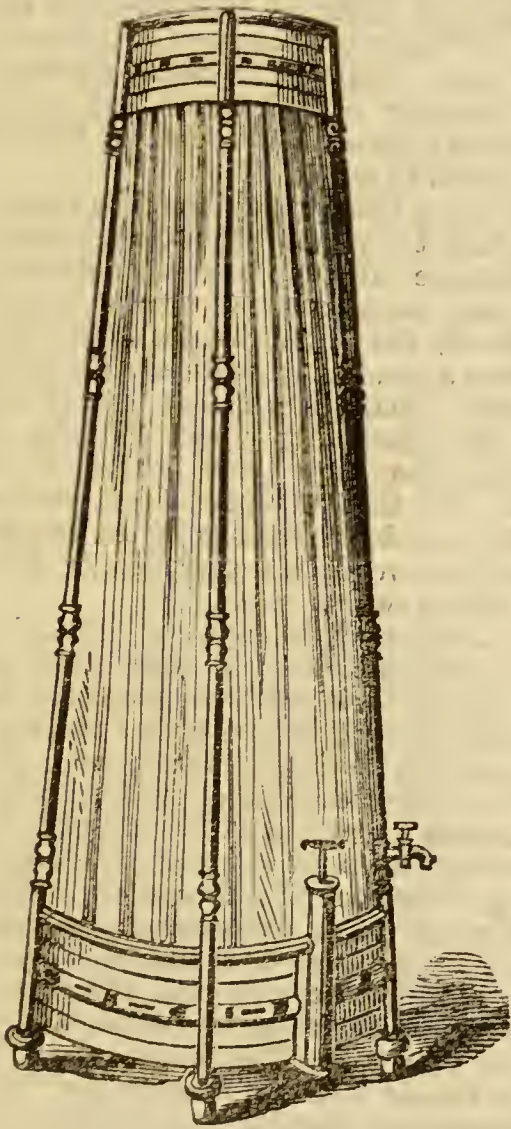
Marine water is undoubtedly better for the bather than fresh, it exerts a more tonic influence, and its temperature is always more agreeable. The proper bathing season in this country is from the beginning of June to the end of September; the temperature of the water then ranges from 55° to 70° Fahrenheit. When it is colder than this, should bathing be ordered for medicinal or other purposes, resort should be had to

The Tepid Bath, which should be of a temperature varying from 85° to 94°, about 88° or 90° being the most convenient and agreeable standard. This relaxes and purifies the skin, and promotes insensible perspiration, and is most generally applicable for purposes of cleanliness and comfort; it is very soothing and salutary in irritable states of the system, when the skin is dry or chafed, after a journey, or any other fatiguing exercises; but, like the cold bath, it should not be taken with a full stomach. As a remedial agent, it is good in ardent fever, where the temperature is a little above that of health; in diseases of the skin it often produces a salutary reaction; it is useful in chronic rheumatism, and gout during the attack; also in headaches, colds, inflammation about the head and throat. It has also been employed with good effect in obstructions of females (see *Hæmorrhagia*).

The Warm or Hot Bath is understood to range from 93° to 100° Fahr., the standard temperature being about 96°. It ought to be employed as a remedial agent only, being too enervating for other purposes; to promote reaction in various stages of coma or collapse; to allay fever, whether spasmodic or inflammatory, soothe convulsive action, or to cause fainting when it is desirable to relax the tension of muscles and sinews for the reduction of dislocations, opening of con-

stricted passages, or other purposes. The hot bath has a peculiar tendency to allay local or general irritation, and produce sleep; in complaints of the kidneys and loins, and in puffy swellings of the legs it may be resorted to with advantage; it is applicable to weak and irritable constitutions which could not support the shock of cold immersions.

The Shower Bath is a modern invention; its construction is very simple: a reservoir at the top, perforated with small holes, with a plate of metal beneath, which can be withdrawn by means of a cord by the person inside, on whom the fluid falls through the perforations like a gentle shower. This receptacle is supported by three or four slight



pillars or stems, which form the framework of the bath, and a support for the drapery falling down and enclosing all like the covering of a tent; within this, on a seat, with his feet in a pan or tub that receives the descending fluid, sits the patient. The above cut is given for the benefit of those who may not have seen a shower bath, and who desire to realise more fully than a

verbal description may enable them to do the nature of the invention.

This is a valuable agent in the treatment of various affections, and is available for many cases to which the general cold baths would not be applied. Its especial advantages are, first, that the contact of the water, instead of being sudden and momentary, may be gradual and prolonged at pleasure; second, the first shock of the water falls, as it always should do, on the head and breast, without exposing those parts to the danger and inconvenience of contact with hard substances, to which they are liable if the bather plunges so as to immerse them first. These baths are becoming very common in well-appointed houses; they may be used for fresh or salt waters, cold or tepid, as required. They are by no means expensive; a small portable hand-machine of the kind for children has recently been introduced.

Shower baths have been lately used with good effect in the treatment of insanity; the most violent patient has been subdued by their sudden shock, and then tranquillised by their soothing influence; when thus quieted he should be taken out of the bath, dried rapidly, and put into a warm bed; calm sleep will generally follow; the application of this remedy should not be made again until symptoms of violence occur. Poor persons may make a rude, but effectual machine of this kind by suspending an old saucepan, with a hole in the bottom, to some holdfast in the ceiling; put a plug in the hole, with a piece of string attached, place a tub beneath, get into it, take hold of the string and pull out the plug, and down will pour the fluid upon the head and shoulders, passing from them all over the body. For purposes of decency, it is easy to attach an old sheet round the outside of the saucepan, and keep it out by means of a hoop or other contrivance. Thus every cottage may have its bath-room.

The Vapour and Hot-air Baths are useful for a variety of purposes; in paroxysms of gout, acute and chronic rheumatism, various skin diseases, ulcers, lumbago, and sciatica, they are applied with advantage; they are great promoters of perspiration, and have a tendency to relax the system. They have been recommended for the cure of chilblains, cramps, leprosy, yaws, female obstructions, dropsy. The forms of application are various; a very simple one, as good as any, may be extemporized thus:—Place on a fire, near which the patient can sit or lie, a small kettle of water, with a piece of metal tubing attached to the spout, the other end being conveyed beneath the

blanket, or oil-cloth, in which the patient is enveloped; through this, when the water boils, the steam will pass, and spread itself under the coverlet. Another method is to place a vessel of boiling water beneath the coverings of the patient, and keep up the supply of steam by putting into it hot stones, or pieces of metal. Those who can afford the expense, may obtain more complex and perfect apparatus of various kinds of the manufacturers.

Medicated Baths are those in which the water is impregnated with certain mineral, vegetable, and sometimes animal, substances. Thus we have Sulphur, Chlorine, and Iron Baths, Aromatic, and Milk Baths, which, if properly prepared and applied, may be productive of very beneficial effects. The *Aromatic Vapour Bath* is prepared by passing the vapour of boiling water through aromatic plants, from which the active principles are thus carried off. A good *Alkaline Bath* may be prepared thus:—Subcarbonate of Potash 8 ounces; hot water about 20 gallons; employed as a revulsent in chilblains and sanguineous congestions. For a

Sinapized Foot Bath, add 4 ounces of Flour of Mustard to the above quantity of water; to determine the blood to the extremities, and thus relieve the head. This should not be used too hot. The *Mercurial Bath*, employed in venereal affections, is formed of Bi-Chloride of Mercury, from 2 drachms to an ounce to a gallon of water. The *Hand Bath*, or *Manuluvium*, is prepared with Mustard, or Carbonate of Soda; sometimes with Hydrochloric Acid. They are used in cases where there is a strong determination of blood to the chest, and more in French than English practice. The *Antimonial Bath* is composed of Tartrate of Potash and Antimony, of each from 4 to 8 drachms, and 20 gallons of water. The *Aromatic Liquid Bath* is made by boiling a quantity of aromatic herbs, such as Lavender, Mint, Pennyroyal, Rosemary, in a quantity of water, and then adding the decoction to the water in which it is proposed to bathe. The *Astringent Bath* is about half-a-pound of Alum to 20 gallons of water. The *Bran Bath*, good as an emollient in severe colds, may be made by pouring boiling water upon 4 pounds of Bran, making up the quantity to 20 gallons; if for the feet, for which it is an excellent application, of course, much less will do. The temperature should be about 90°. The *Hemlock Bath*, useful in some skin diseases, is made thus:—2 ounces of dried Hemlock; boiling water a gallon; let it

stand for several hours, then strain, and bathe the part affected at a temperature of 90°. The *Nitro-Muriatic Bath*, useful in liver complaints, and where there are gall stones, is 1 pound of Nitric acid and 1 pound and a half of Hydrochloric Acid, to 40 gallons of water; immerse the patient for a quarter of an hour once a day; this may be continued for a fortnight or three weeks. The *Sulphurated Bath*, useful in cases of itch and other skin diseases, is made by dissolving 4 ounces of Sulphuret of Potash in a pint of water, and adding this solution to the requisite quantity for immersing the whole person. Where sea water cannot be obtained, a composition for the *Sea Water Bath* may be made as follows:—For each gallon of Water add Common Salt 3 ounces and a half; Sulphate of Soda, commonly called Glauber Salt, 1 ounce and a half; Chloride of Calcium half an ounce; Chloride of Magnesia 1½ ounce.

In bathing children, it should be borne in mind, that the power of producing heat in warm-blooded animals is at its minimum at birth, and increases successively to adult age; hence, the water that feels but cool to the nurse's hand, may be absolutely cold to an infant. Some persons are fond of what they call hardening their children, by plunging them into cold water in the winter; but this is a pernicious practice, and often produces disease of the lungs or of the digestive organs, *Scrofula*, or *Water on the Brain* (which see).

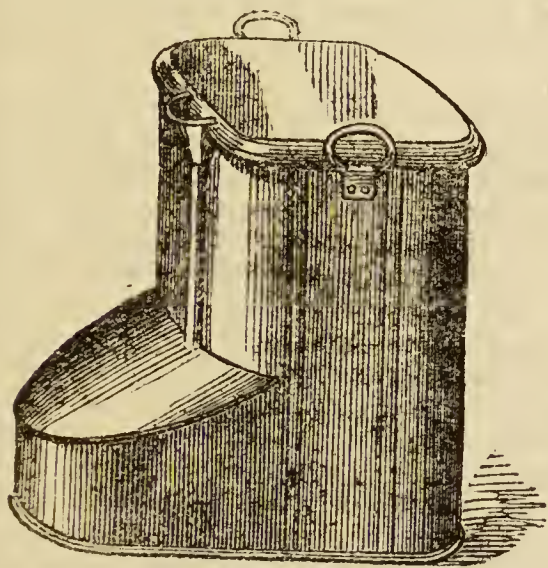
The *Douche Bath* may be either ascending or descending; in the former case the stream of cold water is projected into the rectum, or vagina, by means of a metal tube, called a *Canalus*, (which see). This is used in obstinate constipations, leucorrhœa and chronic affections of the uterus. The descending mode of application is simply pouring a stream of water from a vessel with a spout or nose, considerably elevated, on the part which it is desirable to stimulate; a small water-pot with the rose off is as good a vessel as can be employed, or a common jug will do. The person pouring the stream should stand in a chair, and let it come gently and steadily down on the weak member, a sprained wrist, or a leg or an arm, which has been fractured or dislocated. In some of the bathing establishments on the Continent, the Douche is much employed, the stream being of great force and volume; with us it has not come into very general use.

That which is commonly called *Cold Affusion*, viz., the pouring of a stream of water on the head, when it is desirable to

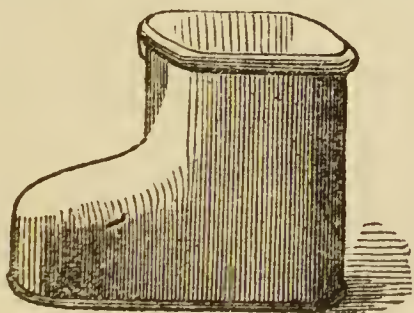
make a sudden and powerful impression upon the system, is but a modification of the Douche; this is resorted to in cases of poisoning by Opium, and other narcotics, as well as by Prussic Acid, or the torpor arising from inhalation of the fumes of Charcoal, and in hysteric Epilepsy, Lock-jaw, &c.; also in inflammatory affections of the brain it is applied with benefit, even to children. The water should be poured on the head held sideways over a tub or pan, from a height of several feet; if the patient is in bed, the head can be projected from the side of it; a large sponge, filled with water, and squeezed from some height on the head, will be sufficient for children: from 1 to 2 minutes should be the period of the application. See *Affusion*.

The *Wet Sheet Bath* is formed by enveloping the patient in a sheet which has been dipped in cold or tepid water, and then wrung out; over this covering blankets are heaped, and a copious perspiration is the result. This, as well as the Douche enters largely into the treatment of patients at hydropathic establishments. See *Hydro-pathy*.

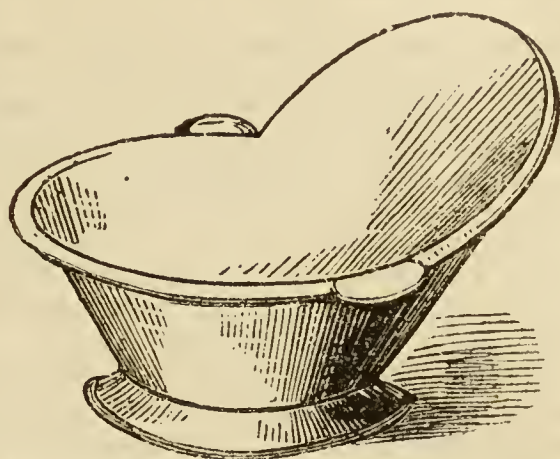
With regard to *shape* and *capacity*, baths vary greatly, those chiefly in use for household purposes are the Slipper Bath, so called



on account of its form, in which the whole person up to the neck can be immersed; the Hip Bath, and the Foot and Leg Bath,—

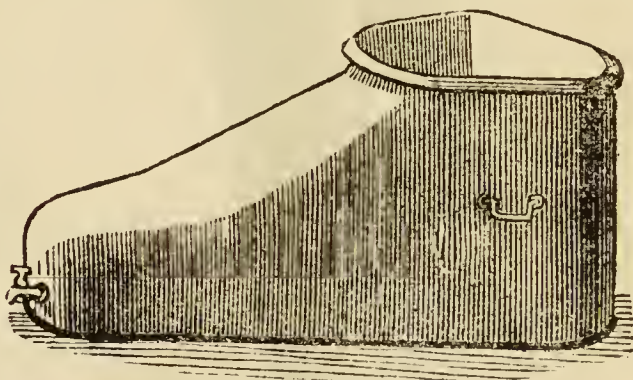


These should be of stout metal, and well soldered and rivetted together. Every house should be provided with one, if not



more of them, and every parish certainly should be provided with its moveable Slipper Bath, for the use of the poor.

There should also be a public Plunging and Swimming Bath, with the requisite accommodations for Tepid and Hot Baths, to which the poorer classes might resort. We all know how intimately health and cleanliness are connected, and as a sanitary precaution merely, it would be well to afford every facility and inducement for these



classes to wash and bathe frequently. There would be less danger from epidemic diseases, which, commencing with them, frequently spread through the whole community, if the bath and the towel were in greater requisition among them. See *Ablution*.

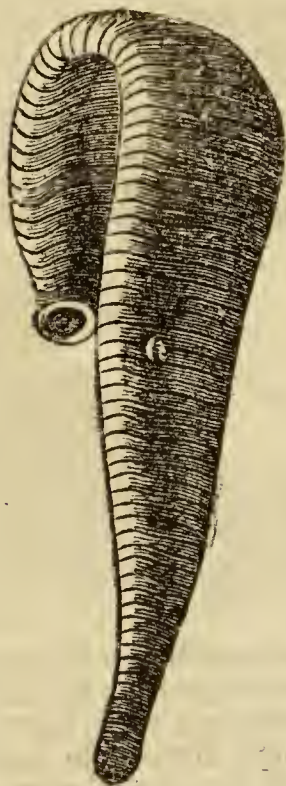
BATTER PUDDING. This is a light and nutritious food for children and invalids; it should be made as follows:—Beat up three eggs in a basin with a pinch of salt, add 4 ounces of flour, and mix the whole into a smooth batter, adding by degrees $\frac{1}{2}$ a pint of milk; put it into an earthen mould, or basin, well buttered, tie it lightly over with a pudding-cloth, place it in a saucepan of boiling water, let it boil about an hour; or else put it into a well-buttered dish, place it in the oven, and let it bake three-quarters of an hour; loaf sugar, with a little ginger and nutmeg, will make it

more agreeable to the palate, and in this way it will be more wholesome, than with currants or raisins, which are often added to it.

Batter pudding may be made without eggs, by mixing 6 spoonfuls of flour with a quart of milk, rubbing it down first with a small quantity, and, when smooth, adding the remainder, with a teaspoonful of salt, 2 of powdered ginger, and 2 of Tincture of Saffron; mix well, and boil or bake for an hour. Sugar may be put instead of salt, and a few currants; but it is perhaps best without the latter. See *Diet, Food*.

BATTLE'S GREEN SENNA POWDER. This was at one time a favourite nostrum; it is supposed to have been senna leaves heated until they became yellow, and then mixed with powdered charcoal. See *Senna*.

BDELLA (Greek *bdullo*, to suck). A horse-leech, or large kind of leech found in this



country, and sometimes, though rarely, used for medical purposes. See *Hirudines, Leeches*.

BAY LEAVES AND BERRIES. This plant is the Laurel of antiquity, and the *Laurus nobilis* of Linnæus; it belongs to the natural order *Lauraceæ*; its leaves are much used for flavouring custards, &c., on account of the prussic acid which they contain, which is, however, not in sufficient quantity to be injurious when mixed with other ingredients. Both the leaves and berries contain an aromatic and stimulant oil, and they were employed by the old herbalists to relieve flatulency; they are now seldom or ever used internally, but some-

times externally, as a discutient and stimulant fomentation. The oil extracted from



them is also made into a liniment; it is known in commerce as *Laurel Oil* (which see).

BAY SALT. It is a popular fallacy that this large-grained, and generally dirty, kind of salt is a better preservative of meat than the finer and more common sorts, over which, if it has any advantage, it arises from its dissolving more slowly when rubbed in. See *Antiseptics, Salt*.

BEAR'S GREASE. The much eulogized fat of the bear possesses little or no advantage over several kinds of animal fat, although it is thought in a special manner to promote the growth and glossiness of the human hair. That which is sold in this country under the name of Bear's Grease, is in reality a preparation which is thus compounded:—melt 3 ounces of Hog's Lard, and $\frac{1}{2}$ an ounce of Spermaceti in $\frac{1}{2}$ a pint of Oil of Sweet Almonds, stir together, and when nearly cold, add a few drops of Essence of Burgamot, or of any other perfume; keep stirring until quite cold, then put into cold cream pots, and keep closely covered. See *Hair*.

BEBURINA. An alkaloid derived from the bark of the Green-heart Tree, *Nectandria Rodaei*, of the natural order *rosaceæ*; properties tonic and febrifuge. The Sulphate is the only form generally employed; may

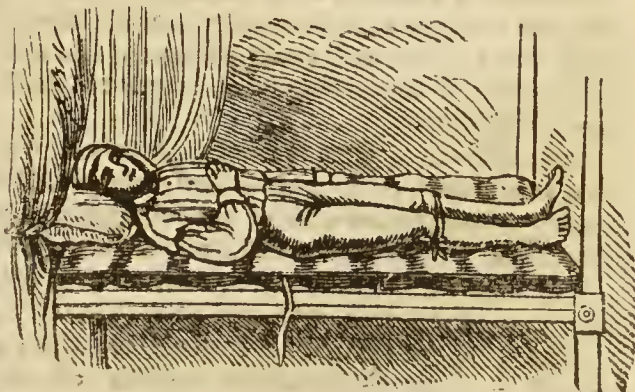
be given in 2 grain doses twice a day, as a tonic in ordinary cases of debility; in intermittent fevers from 10 to 12 grains are given, and sometimes 15 grains during the intermissions; it may be in pills with Confection of Roses, or mixtures with dilute Sulphuric Acid, and a little Tincture of Gentian or Aurantia.

BED. In our present highly civilized state, we spend so large a portion of our time in bed (about one third), even when in health, that it is of great importance for us to understand what is the best form, and material, and condition, of this place of repose; and the Family Doctor would but ill perform his duty were he to omit laying down a few sanitary rules in relation thereto. We have already spoken at some length (see *Air*) about *Bed Rooms*, and shall probably have more to say on this head, when we come to *Sickness*, and *Ventilation*, at present it will be sufficient to observe that, for healthy persons, it is unadvisable to burn a fire or gas light during the night: the former, while it burns briskly, promotes ventilation, by causing a current up the chimney; but very commonly, towards morning, it sinks low, and has not sufficient power to cause a draught, and is only a consumer of oxygen and a liberator of carbonic acid; such also is the gas burner, unless there be a tube over it running into the chimney, and carrying off the noxious fumes. Most persons experience a sense of insecurity when they retire to rest with the bed-room door open, yet this is the safest condition in which to sleep as far as the health is concerned; the air is then constantly undergoing a change, and does not become vitiated, as in a confined space, where one or more persons, by breathing, are abstracting its vital principle. A light chain bolt will answer the purpose of security, and enable the door to be kept ajar; or if this is objected to, the upper pannels may have perforated zinc plates let into them, or some other contrivance, by which open spaces can be left: this is sometimes done with bed-room windows, and it may be so managed, that the openings can be closed at pleasure. For the rest, have as few obstructions to the free passage of air as may be; bed-rooms are far too much encumbered by bed and window curtains, and other drapery; if people knew the inestimable value of a pure and frequently changed atmosphere, they would not wrap and enclose themselves as they do, shutting out their best friend, oxygen, and in their deadliest enemy, carbonic acid. Always let beds be stripped directly they are vacated, and the clothes thrown right off; unhealthy excre-

tions are given off by all animal bodies in a heated state, and these must be dissipated as soon as possible, therefore open the window, and let the fresh breeze sweep through the room. Remove slops and dirty linen the first opportunity, and sweep out frequently, scattering tea leaves to keep the dust from flying; do not wet the floor in damp weather, but when it is fine and dry, this should occasionally be done, early in the morning, that it may be perfectly dry by night.

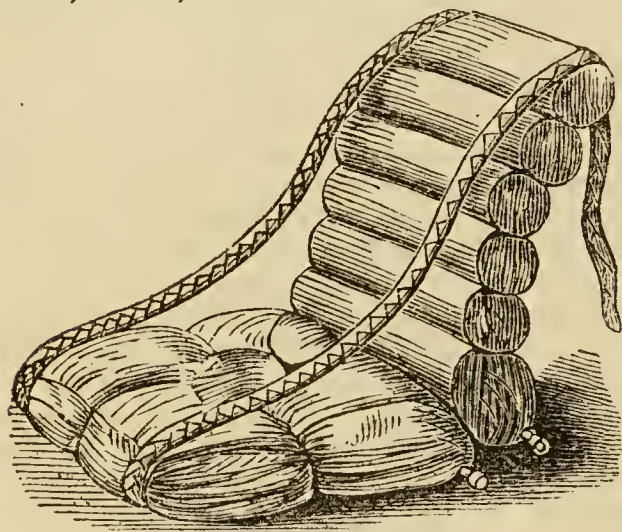
Beds are made of a stout material called "tick," and stuffed with feathers or wool, or woollen shreds; in the latter case they are called "flock" beds. *Mattresses* are more tightly stuffed than beds, with hair or woollen material; they are quilted, and this and the broad distinct borders are obvious distinctions. *Palliasses* are in shape and appearance like the last kind of bed; they are commonly stuffed with straw, and are placed on the bedstead as a foundation for the mattress or bed. Children should never sleep upon feather beds, they are too soft and luxurious; the body sinks into them, and becomes, as it were, buried and surrounded by the yielding material. Perspiration, always profuse in the young, is promoted to a weakening extent, and the breathing too much confined. Hair, or cotton, or wool mattresses, are the best for juvenile sleepers, and indeed for all whose vital energies are not impaired by age or disease; although the feather bed, being the softest and most comfortable, is, and will be, almost universally used by those who can afford the luxury.

Hydrostatic or Water Beds, have lately come into use, chiefly for the sick; and, adapting themselves, as they readily do, to the shape of the body, they do not cause the distressing sores, which those long confined to a recumbent position frequently contract. The introduction of vulcanised India rubber into the manufacture of articles of utility, has rendered many contriv-



ances for the relief of the sick and suffering possible; thus we have elastic, and spring cushions, couches, and beds. The following cut represents one of these contrivances,—an air or water cushion, of waterproof material, which may be adapted to any elevation, for sitting or lying on, so that the patient may be relieved by a change of position, without the necessity for a removal to another resting place.

On page 87, we have a representation of an Invalid Mattress, or Hydrostatic Bed, which can be placed on any ordinary bedstead, couch, or sofa frame.



There are several makers of these extremely useful inventions in London; among the principal are Mr. Hooper, of 7, Pall Mall East; Messrs. Edmiston and Son, 67, Strand; Messrs. Matthews and Son (late Mackintosh), 58, Charing Cross; Messrs. T. Watts and Co., 466, Oxford Street, West; Messrs. Spencer and Co., 116, Fenchurch Street. The latter have recently introduced the *Adjusting Beds for Invalids*, a very simple and ingenious contrivance, by which those afflicted by bed sores may be easily relieved of any pressure on the tender parts, and by which also the bed-pan may be introduced beneath the patient without the necessity for any alteration of place or position.

To keep a patient in a sitting position in bed, an ordinary light chair turned upside down and guarded with pillows, answers very well, in the absence of a more elaborate contrivance.

Bed Sores. Emaciated persons who have long been confined to bed, often suffer greatly from ulcers on the projecting parts, where the bones are unnaturally sharp from the absence of the fat which usually covers them: in such, the vital powers are at so low an ebb, that little or no resistance is offered to the destructive action of the

sloughing process, which results from the friction and excoriation of the parts. It may generally be known when this process is about commencing, by a slight inflammatory suffusion of the skin, and soreness of the parts, and precautionary means should be immediately taken. The best application to try first is Collodion, brushed lightly over the inflamed surface, and this may be done even if the cuticle is removed; it causes a little smarting for a few minutes, but afterwards affords effectual relief. Bathing the skin as soon as it becomes inflamed, with hot brandy and water, or hot water with a little Tincture of Arnica, mixed in it, in the proportion of about a teaspoonful to a pint, and afterwards drying the parts, and dusting them with Starch, Violet Powder, or Fullers' Earth.

One of the Water or Air Beds already spoken of should at once be procured; and if, in spite of all these efforts, the sores will come, they must be treated as *Ulcers* (which see).

BEEF. This is the most strongly nutritious of all the kinds of animal flesh commonly eaten, but it is more difficult of digestion than mutton, and is therefore seldom recommended for invalids, except in the form of

BEEF TEA, which is a very important article in the dietary of the sick. In the last stages of fever, or any other disease which results in extreme exhaustion, this is, perhaps, the form of nourishment which is best adapted to produce a reaction in the system, by the stimulus and support which it affords. Beef tea is commonly made too weak; the following is the form of preparation recommended by the great chemist Liebig:—Take a pound of lean beef, pick out all the fat and bone, if any, chop small, or mince, and mix it with its own weight of cold water, which slowly heat until it reaches the boiling point, at which keep it for a minute or two; then strain through a coarse towel; add a little salt, and any seasoning which may be desirable. Where the exhaustion is very great, a couple of table-spoonfuls of brandy may be added to the above quantity.

BEER. See *Ale*.

BEE'S WAX (Latin *Cera flava*, or yellow wax). Has been recommended by some surgeons as an application for old and indolent sore legs of working people: the mode is to melt the wax and apply it with a brush as cool as possible, short of setting. For other uses, see *Cera, Wax*.

BEET ROOT. There are several species of plants of the genus *Beta*, the succulent roots

of which are sweet and nourishing ; one of the most common in this country is the *Mangel wursel*, much used for feeding sheep and cattle. In France, the Beet is largely cultivated for the manufacture of sugar, which, however, is not equal to that of the cane for its sweetening powers. The root itself when boiled is easy of digestion, and it might be used with advantage as a table vegetable, but its mawkish flavour renders it distasteful to most palates. The large succulent leaves of one species are eaten as a common vegetable by the agricultural labourers of many parts of the Continent, and might, with advantage, be introduced here. The beautiful colouring matter of the root is sometimes used to give a rich tint to certain pickles, and it would be well to substitute it for the deleterious substances now employed in sweets and confections.

BELLADONNA. Deadly Nightshade, botanical name *Atropa Belladonna*, natural order *Solanaceæ*. This is a very poisonous plant, not uncommon in the hedges in some parts of England ; it has a purple, bell-shaped blossom, about an inch long, and oblong pointed leaves, growing on short stalks, generally in pairs ; the stem is upright, stout, and rather hairy, sometimes altogether green, but oftener tinted with red ; the berries are about the size of wild cherries, of a dark purple colour, glossy, sweet, and not unpleasant to the taste ; hence they have been often eat by children, ignorant of their deleterious qualities, with fatal results. *Belladonna* means literally fair lady, and was most likely given to this plant on account of the tempting appearance of these berries : *Atropa* refers to its deadly properties, coming from *Atropos*, the ancient name of one of the fates, or evil destinies. The Saxons called the plant *Banewort*, or murdering weed. *Raging and Furious Nightshade* are also old names significant of its evil character. For cut, see *Atropa*.

The leaves, roots, and berries, indeed every part of this plant are powerfully narcotic, and act in some cases as a diaphoretic, diuretic, and laxative. Medicinally it is employed to alleviate pain, great nervous excitement, and spasm ; it is also useful in neuralgic and convulsive affections, as well as in rheumatism, dysmenorrhœa, &c. Its powerfully poisonous nature, however, renders great caution necessary in its administration, and it should never, on any account, be resorted to by unqualified persons. Dryness and constriction of the throat, dimness of sight, and giddiness, are the symptoms of the necessity for its discontinuance. The

following are its officinal preparations with their doses :—Powdered leaves, 1 grain, once or twice a day, gradually increased to 2 or 3 grains, under careful supervision ; the Powdered Root is sometimes used, it is thought to be rather stronger ; from $\frac{1}{8}$ th to $\frac{1}{4}$ th of a grain is the dose for children ; Extract, from $\frac{1}{8}$ th to $\frac{1}{4}$ th grain twice a day, for a child 1-12th grain ; Alcoholic Extract, from 1-6th to $\frac{1}{4}$ th grain ; Tincture, from 5 to 20 minims, equal to from $\frac{1}{2}$ grain to 2 grains of the dried leaves ; Atropine and Sulphate of Atropine from 1-30th to 1-6th of a grain ; this is the active principle of Belladonna, and is seldom given internally in this country.

For external use it is employed in the form of Cerate, Cataplasm, Liniment, Lotion, Oil, Plaister, Solution, Ointment. The vapour of the Decoction is sometimes inhaled to relieve asthma, and the Extract is applied to relieve pain, and dilate the pupil of the eye. (See *Nightshade*.)

BELLY. That part of the human body which contains the bowels or intestines, and reaches from the breast to the thighs. See *Abdomen*.

BENEDICTUS (Latin, *benedico* to bless). A term applied to several herbs and compositions on account of their supposed good qualities ; thus we have *B. Aqua*, Blessed Water, a compound of Lime water, and water distilled from Thyme ; sometimes also applied to an emetic : *B. Laxativum*, Blessed Laxative, composed of Rhubarb and Senna ; sometimes *Lenitive Electuary*, or *Confection of Senna*, (which see). *B. Vinum*, Blessed Wine, meaning *Antimonial wine*, (which see).

BENZOIN. Gum Benjamin, as Benzoin is commonly called, is the balsamic resin of the *Styrax Benzoin*, natural order *Styracæ*. It is a good stimulant and expectorant ; and, when burned, its vapour is deodorant, and antiseptic ; it is therefore useful in sick rooms and hospitals. When sublimed by heat, it yields the *Benzoic Acid* already described (see *Acids*) ; this, as well as the gum itself, is diuretic and useful in calculous disorders, especially where there are phosphatic deposits ; its combinations with Ammonia, Potash, and Soda, called Benzoates of these alkalies, are more decidedly diuretic, and useful in dropsy and gouty concretions, &c. They may be readily prepared by adding Benzoic Acid to the alkalies. Benzoin mixed with ointment prevents rancidity ; its vapour is thought to be good in whooping-cough ; it is a common ingredient in cosmetic washes, and makes a good balsamic tincture for wounds and cuts. The Compound Tincture, under its popular name of

Friar's Balsam, has long been employed as a styptic and healing application ; a piece of lint or soft rag dipped into it and wrapped round a cut finger, although it will cause smarting at first, will commonly stay the hæmorrhage, and effect a cure without the



necessity for another dressing, unless the wound be very severe ; it is also good for distressing coughs, the dose being from 30 drops to a drachm on lump sugar, or in mucilage ; the dose of Benzoin is from 3 to 10 grains.

BERIBERI or BARBIERS. This is a disease peculiar to the East Indies and Ceylon, the characteristics of which, according to Dr. Mason Good, are "Spasmodic rigidity of the lower limbs, impeded locomotion, often shooting to the chest, and obstructing the respiration and the voice, trembling of the extremities, painful stupors, and general œdematous swelling." The most efficacious remedy for this disease appears to be Mercury administered in tolerably strong doses.

BEULAH WATERS. These are the waters of the Beulah Spa, a medicated spring, situated near Norwood, in Surrey, in the midst of delightful scenery, and very near to the world-famed Crystal Palace ; their qualities are those of a carbonated saline aperient, somewhat stronger than the Cheltenham waters, as the following result of chemical analysis will show :—one pint contains 62 grains of Epsom Salts, 18 grains

of Common Salt, 20 grains of other saline matter, and 8 cubic inches of Carbonic Acid. See *Mineral Waters*.

BEVERAGES. With these we have nothing to do, except in so far as they concern the sick room and the nursery. Beverages for the sick may be classed under one or other of the following heads : Aperients, Diluents, Febrifuges, Restoratives, Stimulants, and Tonics. In the first class we must place *Seidlitz Powders* and several of the *Mineral Waters* (which see). The former may be prepared by first putting into a tumbler, Bicarbonate of Soda 1 scruple, Potassio Tartrate of Soda, or as it is sometimes called, Rochelle Salts, 1 or 2 drachms, pour in water, mix, and dissolve, then add 15 grains of Tartaric or Citric Acid, and drink while in a state of effervescence. A little of the Powder or Tincture of Ginger may be added to prevent griping, and sugar to render the draught more palatable. It is good to take this early in the morning, after a blue pill at night, for functional derangement of the *Liver* (which see)

With the above proportions of Soda and Acid, various effervescing drinks may be made, which are very pleasant and refreshing to invalids, especially in hot weather : thus for *Soda Water*, it would be simply those ingredients ; for *Potash Water*, rather more diuretic, Bicarbonate of Potash instead of the Soda ; for *Lemonade*, the Soda and Acid, with a few drops of Essence of Lemon, or a little Lemon juice ; for *Orangeade*, the same, with Orange juice to flavour, or better still, Syrup of Orange, to give sweetness as well ; for *Ginger Beer* the same two ingredients, with a little Powder or Tincture of Ginger. Powders for the preparation of all these Beverages may be obtained of any druggist, and most of them may, also, be purchased in bottles prepared by machinery, which confines the Carbonic Acid gas in the liquid until the bottle is opened, when its efforts to escape causes the sparkling effervescence which renders the drink so refreshing ; a portion of it is swallowed, and by causing eructation relieves flatulency, especially when combined with Ginger or other aromatic spice. Handy little portable machines for the preparation of effervescing drinks may now be purchased, they are inexpensive and very useful in a family.

There is also a clever contrivance, by which a bottle of Soda Water, or other beverage, can be drunk a little at the time without becoming flat and rapid ; it is called an *Invalid Tap*, and is a small straight tap, furnished with a moveable point, which is

passed through a hole in the cork, previously made with a borer; as soon as this point reaches the inner end of the cork it falls into the bottle leaving the tube of the tap open, into this the fluid passes, and out at the other end, as soon as the valve is turned which obstructs its passage; the tap remains in the cork until the bottle is empty. In this manner a bottle of champagne, or any effervescing drink, may be taken by a sick person in small quantities, without the admission of atmospheric air to the fluid.

Cooling Acidulous Beverages may be taken with advantage during the summer by all persons, whether well or ill; one of the most pleasant and easily prepared is that commonly called *Imperial*, it is prepared thus:—Put 2 drachms of Cream of Tartar, 2 slices of Lemon, and 2 ounces of Lump Sugar into a jug, and pour on it a quart of Boiling Water; let it stand until cool, strain and drink when required. Another, is a dessert spoonful of Raspberry Vinegar added to a tumbler of Cold Water: nothing can be more grateful than this to the palates of those stricken with fever. *Apple* and *Cranberry Waters*, again, are very nice and refreshing; made, in the former case, by boiling two large apples, sliced, and, in the latter, a cupful of the berries, in a quart of Water, with sugar and Lemon-peel to palate: sometimes a little White Wine is added to the mixture, and a Clove or two when it is desirable to make it more warm and strengthening; to make it nourishing for invalids, a little Oatmeal may be stirred in while it is boiling. Then there are Beverages made by adding a table-spoonful of Currants, or other preserved fruit, or jelly, to a tumbler of Water; the Black Currant is especially useful in colds accompanied with hoarseness; this should be taken hot, after the patient is in bed, as should, also, *White Wine Whey*, made as follows:—To a pint and a-half of skimmed milk, boiled, add 2 glasses of Sherry or Raisin Wine, 15 grains of Nitrate of Potash, and enough Lemon-peel to curdle the milk; boil up, and set it aside until the curds sink; strain and sweeten.

Vinegar and *Lemon Wheys* are made by adding very gradually to boiling milk as much vinegar or lemon juice as will serve to curdle it, dilute with hot water, and add sugar to palate. This is less heating than the wine whey, and serves equally well to excite perspiration. *Rhubarb Sherbet* is an agreeable beverage: it may be prepared as under: cut up into small pieces about $\frac{1}{2}$ a pound of Rhubarb, stripped and cleaned, add to it a quart of Water, boil 10

minutes, and pour it while hot into a jug, in which has been previously put some Lemon Peel and Lump Sugar: when cold it is fit to drink. Other fruit sherbets may be prepared in a similar way. *Egged Wine* and *Egg Flip* are good cordial restorative beverages: the former is thus prepared: beat up 2 eggs thoroughly in a basin, with $1\frac{1}{2}$ ounce of powdered Lump Sugar, and a little ground spices; heat $\frac{1}{2}$ a pint of Sherry Wine and water, about equal quantities; when boiling pour it over the eggs and spice, stirring the while, then pour it from the basin to the saucepan, and back again, repeating the operation until it thickens. The flip may be made in the same way, putting strong Ale instead of the wine; a little Brandy is sometimes added. *Rice Water* is made by boiling $\frac{1}{2}$ a pound of Carolina rice in a pint of water for 2 or 3 hours, adding towards the last a little Lemon Peel, with Nutmeg, Cinnamon, or Cloves, as may be preferred; strain while hot, and dilute with water until thin enough. This is almost the only diluent which may be safely given in diarrhœa; it should be taken cold, or nearly so, and is best without sugar, which is slightly laxative. *Barley* and *Toast Water* are two other invalid drinks which are much used. For the preparation of the former, see *Barley*; the latter, as most of our readers well know, is made by toasting a crust of Bread, and plunging it, while hot, into a jug of Cold Water, or, as some make it, pour Boiling Water on a piece of Toast. There are many other beverages, such as *Capillaire*, *Spruce Beer*, the various *Possets*, &c. (which see), but a mention of the above will be sufficient for our present purpose as far as adults are concerned; for children, the more simple the drinks are the better; pure Spring Water or Toast Water is that which should be habitually taken at dinner; for a weakly child, a wineglassful of ale or beer may be allowed, it should not be over strong, and home-brewed, if it can be had; three or four ounces a-day is as much as should be taken. Children are best without wine altogether; they require few stimulants, and their appetite is generally good, so that they take plenty of nourishment in the shape of solid food. See *Diet, Regimen*.

BI or BINUS (Latin *bis*, twice), meaning two, or a pair. Thus we have *Bi-ceps*, two-headed, applied to a muscle of the thigh, and another of the arm. *Bi-cornis*, two-horned, applied to the *Os-byoides*, which has two processes or horns; and, formerly, to all muscles which have two points of insertion. *Bi-cuspidati*, having two spur-like taber-

cles, applied to the two first pairs of grinders in each jaw. *Bi-furcatum*, two-forked, the division of a vessel or nerve into two branches. *Bi-gastor*, two-bellied (see *Digastrius*). *Bi-hernius*, having a scrotal hernia on each side (see *Hernia*). *Bi-lobus*, two-lobed, like the ears. *Bi-manu*, two-handed, like man, the first order of the class *Mammalia*. *Bi-mestris*, two months old. *Bi-occulus*, two eyes; a bandage for securing the dressings on both eyes. *Bi-torta*, twice turned, applied to a root (see *Bistort*). *Bi-venter*, two-bellied, applied to muscles which have two sacs or cavities.

BILE (Latin *Bilis*). A peculiar oily or saponaceous fluid, secreted from the blood by the *Liver* (which see). In man it is of a brownish yellow colour, and bitter taste. Its composition, according to Berzelius, is as follows:—Water 908.4; Pecromel 80; Albumen 3; Soda 4.1; Phosphate of Lime 0.1; Common Salt 3.4; Phosphate of Soda mixed with that of Lime 1, in 1000 parts. The process of secretion and diffusion of Bile appears to be this—the dark venous blood, passing through the liver on its way back to the heart, is there divested of its noxious matter, consisting largely of carbon, and so rendered fit for re-entering into the arterial circulation. A portion of the matter thus separated from the blood is the Bile, which is discharged into the duodenum and there mixes with the digested food, and performs the important office of fitting it for absorption into the system; the Bile thus mixed with the elements of nutrition becomes also absorbed, and it appears likely that some of its constituents are intended and adapted to support the processes of respiratory combustion. It is the colouring matter of bile, chiefly, which is discharged from the bowels of one in a good state of health, giving its peculiar tint to the excrements. When, owing to some functional derangement, this matter is absorbed into the blood and mixes with the circulation, we may observe this yellow tint on the surface of the skin. See *Jaundice*.

This divergence of the colouring matter from its proper course does not appear, however, to produce any very serious effect upon the system, but the elements of the Bile itself, if they are not properly mixed and assimilated, act like a narcotic poison, causing head-ache, sickness, and all that class of distressing symptoms which are included in the diseases generally known as *Liver Complaints*, or *Biliary Disorders*, as we should more properly term them; of these we will now proceed to speak. These disorders are of very frequent occurrence;

and there is no doubt that, a vigorous state of the system cannot be, unless there is a due secretion of Bile. Then, again, the healthy action of the liver depends so much upon the state of the stomach and digestive organs; and all these parts act and react so much upon each other, that there is frequent derangement and consequent indisposition. Indeed, according to some authorities, "The state of the biliary system depends upon the general state of the health; and the absence or redundancy of bile is not the cause but the consequence of disease."

Deficiency of Bile may be a symptom of passive congestion of the liver, of organic disease of that organ, or of obstruction of the biliary ducts; it may be known to exist by the pale colour of the fauces, irregular action of the bowels; there is generally pain between the shoulders, a sensation of fulness in the region of the stomach, and great mental and physical depression. In this case the remedial means to be taken are the administration of about 3 grains of Blue Pill, or Grey Powder (Mercury and Chalk), every other night, with a small spoonful of Castor Oil, or a Senna draught each following morning, with the following mixture:—1 drachm of Carbonate of Potash, 2 drachms Extract of Dandelion, 6 ounces Infusion of Gentian or Calumba; take two table-spoonfuls two or three times a day. The diet should be light and nourishing, but quite plain; Pastry, Cheese, and Oily preparations of all kinds to be avoided; the only exception being in favour of toasted or broiled Bacon, of which a slice may be taken for breakfast. Where there is much debility, Malt liquor, Wine, and weak Brandy and Water should be taken, and daily exercise of a light, unfatiguing character; the mind should be relieved as much as possible of business cares and perplexities, and relaxation sought in cheerful society; the pores of the skin relieved of obstructions, by tepid baths and sponging: if the bowels are obstinate, it is better to resort to clysters of warm water, with, perhaps, a little soap or salt in them, than to persist in the use of purgatives, which have a weakening tendency. In the first stages of the disease, the tongue is generally much coated, but after it has become tolerably clean, 20 drops of diluted Nitric Acid may be given with advantage, twice a-day, in Infusion of Dandelion Root, and, perhaps, a bitter tonic such as Gentian or Calumba. Children, especially those of fair complexion and weakly habit, often suffer from this deficiency of bile; but, in this case, the correction of the mischief

should not be attempted with mercurials, although this is the course too generally pursued: 3 grains of the Grey Powder in combination with 5 grains of Rhubarb, may be given twice a-week, but nothing beyond this: the system must be strengthened by tonics, and a good supply of animal food. Calves'-foot jelly, milk, and eggs are good, if they do not disagree with the stomach: some preparation of Iron is the best tonic medicine for such a case; the following formula may be recommended:—Citrate of Iron, 1 drachm, Aromatic Spirit of Ammonia, 1 drachm, Cinnamon Water, 6 ounces; take a tablespoonful twice a-day. Salt-water bathing is also likely to prove beneficial, in the open sea, if in the summer months.

Redundancy of Bile. This may be a symptom of active congestion of the liver, and will, it is likely, result in *Bilious Diarrhœa*, or what is commonly called *English Cholera*. The cause of this form of disease is very commonly excessive indulgence in the pleasures of the table; more carbon is taken into the system in the shape of oleaginous, fatty, and saccharine matter, than can be absorbed and assimilated; the biliary passages, or ducts as they are called, become clogged, respiration is impeded, and the whole work of digestion and nutrition becomes difficult, if not impossible. Nature then makes great efforts to get rid of the superfluous matter, hence vomiting and purging ensue; but previous to this, the patient has admonitory hints in the shape of head-aches, accompanied by sickness, pains in the back and stomach, heat and constriction in the throat, a weight at the chest, and dimness of vision, with floating specks, and other optical illusions. Idle and sedentary habits also, and breathing an impure and heated atmosphere are causes of excessive secretion of bile. Large and luxurious eaters should also be great walkers; it is only by physical activity that the functions of respiration, circulation, &c. can be kept in healthy action; and if much is given for these organs to perform, they should at least have all the assistance which can be rendered them: but those who lead luxurious lives are seldom very active in their habits, hence bilious complaints are common among them. That want of exercise has much to do with biliary derangements, is proved by their greater prevalence among females, especially of the middle and upper classes; they would no doubt be much more prevalent with them, were it not for the periodic relief which the system finds in the menstrual discharges, the

stoppage of which often causes a bilious attack. It may generally be taken for granted, when sick head-ache and other symptoms of a redundancy of bile ensue, that there is something wrong in the diet or habits of the sufferer, let him eschew rich sauces and soups, curb his appetite for wines and strong meats, take plenty of exercise, and bathe frequently, that the skin may be in a condition to perform its work of excretion, and he will no doubt be able to do without blue pill and purgatives. Still there are many cases, in which this excess of bile proceeds from other causes than those above alluded to. Abstemious livers, of spare habits, who take plenty of exercise often suffer from it, and sometimes very severely; the cause with them may be some organic defect which prevents the absorption of the carbonaceous matter taken as food, or the stoppage of the biliary secretion to its proper destination. The medical practitioner, whom they may consult, will seek out the cause, and direct his remedies to operate upon that; we can only prescribe generally. An avoidance of animal fat, much sugar, strong tea or coffee, spirits, and the heavier wines—such as port; if malt liquor is taken, let it be bitter, or some light ale, and of this not much; milk and eggs are not good to take regularly, although a little of both in beverages and puddings will not hurt. The meat should be plain and well cooked, taken with bread or well boiled vegetables; the puddings of a farinaceous kind, and fruits ripe and unripe may be eaten sparingly. Open air exercise should be *regularly* taken, and the skin kept clean; if stimulants are required, a little Sherry Wine, or weak brandy, or Gin and water will be best. For medical treatment, we would recommend pills composed as follows:—Compound Rhubarb Pill, 2 scruples; Blue Pill, 1 scruple; divide into 12, and take one or two occasionally. If the bowels are obstinate, a clyster composed of a pint of warm water with a little salt or thin gruel, should be thrown up, or a dose of castor-oil taken in the morning. When the symptoms of a severe bilious attack come on, it is best to begin with a 5-grain blue pill at night, and a black draught in the morning, then follow up with the above.

Biliary Ducts. These are the passages or channels, through which the biliary secretion passes to the duodenum, and other parts of the system where it is required; there are three of them, called by anatomists, the *Hepatic*, the *Cystic*, and the *Ductus Communis Choledocus*, the latter term meaning a receptacle for bile. The last is

of these is the common excretory duct of the Liver and Gall bladders; it is formed by the union of the two former, and is about three inches long, descending through the right border of the lesser omentum, and behind the duodenum to its inner termination, where it passes between the muscular and mucous coats of the intestine, and communicates with a papilla common to it, and the pancreatic duct (see *Ducts*). Congestion of these passages is a not uncommon cause of biliary derangement, a partial or total stoppage of the flow of bile being the consequence. Among the *causes* may be named obstruction of the passages by gall stones (see *Gall*); disease of the duodenum, at the parts where the ducts enter it; and the pressure of tumours upon the ducts in any part of their course. The peculiar disease which this congestion originates, is *Jaundice*, (which see).

Bilious or Yellow Fever is another disease, arising out of biliary derangement, it is sometimes called *Bilum Fever*, or *Black Vomit*, and is a remittent fever, accompanied with yellowness of the skin, and vomiting of a black or dark brown fluid; these two symptoms are its invariable accompaniments, and they are attended with all the usual marks of fever in a high degree. This fever frequently attacks Europeans in the West Indies and other hot climates, and is extremely fatal, not above 1 in 20 persons affected by it surviving. It first comes on with weakness and pain in the limbs, headache, heat in the eyes, parched mouth, the tongue is browned and furred, with red edges; there is a hard, quick, and full pulse, a dry hot skin, the bowels are confined, and the urine small in quantity and high coloured, commonly tinged with bile. In from twenty-four to forty-eight hours the fever reaches its height; and the powers of life sink beneath its fury; the pulse becomes almost imperceptible or intermittent, the breathing laboured and difficult; there is a distressing hiccup, continual vomiting of the black matter, and bleeding from the nose, mouth, and other passages, and very shortly exhaustion and death.

A milder form of Bilious, or as it is sometimes called *Gastric Fever* prevails in this country, the treatment of which varies but little from that prescribed in *Typhus* (which see). In this the mischief is almost wholly confined to the alimentary canal; the head is but little affected, and the febrile symptoms do not run high, therefore it is best not to administer violent remedies. If, as is commonly the case, there be diarrhoea, let it go on for a little time, as by this

means the system becomes relieved of its superfluous bile; it must, however, be carefully watched, and checked, if the motions exceed three or four daily; if the motions should be very offensive, finely powdered vegetable charcoal may be given 10 or 15 grains twice a day in water. After the first week the diarrhoea should be stopped, and to this end an enema of Starch or Gum water, with Laudanum (20 or 30 drops for an adult) had better be tried, before recourse is had to medicines; should this not succeed, Chalk Mixture, with a little Aromatic Confection, with 6 drops of Laudanum in each dose, three times a day; or the following:—Diluted Sulphuric Acid, 3 drachms; Laudanum, 2 drachms; Water, 6 ounces; mix and take 1 ounce every three or four hours, or after each loose motion. Should these not have the desired effect, try these powders, one every six hours:—Powdered Opium and Rhubarb, of the former 1 grain, of the latter 12 grains; Bicarbonate of Soda, 12 grains; divide in six. If, on the contrary, there is constipation of the bowels, administer a clyster of thin Gruel with Salt, or brown sugar, administering also Castor Oil, or some mild aperient, should the operations be sufficiently copious. Should there be obstinate vomiting, give Soda Water, or a simple effervescing draught (see *Beverages*); if these fail, try Hydrocyanic Acid, in drop doses, in plain water, or either of the above drinks; a blister to the pit of the stomach may also be applied should other measures be necessary; and as a last resort, 6 grains of Calomel may be placed upon the tongue, and washed down with a little plain water. To restore the tone of the stomach and assuage thirst when the diarrhoea is stopped, give acidulous drink of some kind. This is a good formula:—Nitro-Muriatic Acid, 10 drops; Lump Sugar, 1 ounce; Water, 1 pint; half a tumbler to be given every three or four hours. For restoring the strength of the convalescent patient, give Chicken Broth, Beef Tea, Wine, and Bitter Ale; if the abdomen becomes swelled and indurated, let it be well rubbed night and morning with a liniment composed of Turpentine and Sweet Oil in equal quantities; in this case the gruel enema may be used with Castor Oil and Turpentine, of each about a table spoonful. The recumbent position should be maintained throughout the attack.

Bilious or English Cholera. Most commonly shows itself in the hot summer or autumnal weather, and its violence is in proportion to the degree of heat prevailing; persons who go from a cold to a hot climate are often attacked by it; and it appears

likely that the change in the temperature causes some derangement in the biliary secretion, which becomes more acrid, or is more abundantly secreted than usual. A sudden obstruction of the perspiration by a chill, eating indigestible food, particularly, and fruits, will sometimes give rise to an attack; but it is likely that they would not have done so, but for some circumstance connected with atmospheric changes which were unnoticed. The characteristics of this disease are nausea, pain, and distension of the stomach and bowels, succeeded by purging and vomiting, for the most part of bilious matter; there are severe griping pains, cold clammy sweats, and frequently cramp in the lower extremities. Sometimes the attack is preceded by premonitory symptoms, such as languor, drowsiness, and headache, accompanied with pain between the shoulders, and flatulent distension of the abdomen. The countenance assumes an anxious expression, and becomes dark and bilious-looking; the tongue is hot and furred, the urine highly coloured, and the bowels either costive or greatly relaxed. On the occurrence of these symptoms, Calomel should be at once resorted to—a couple of three-grain doses, with an interval of a day between, each followed by a Rhubarb and Magnesia draught; the diet should be spare, and the only drink at dinner, toast-and-water, with perhaps a tablespoonful of brandy. By these means, a threatened attack may sometimes be warded off. On some occasions the symptoms are more formidable than those above described; in addition to which, in an aggravated degree, there is great restlessness and anxiety, utter prostration of strength, hurried respiration, hiccup, coldness, and, it may be, cramp of the extremities; feeble and intermitting pulse, and death within twenty-four hours. The extremely irritable condition of the stomach, renders the treatment in this disease somewhat difficult; luckily, simple diluents, such as Barley Water, or Toast-and-water, will often effect a cure; lumps of Ice put into the mouth, and allowed gradually to dissolve, will quench the thirst, cool the stomach, and often tranquillize the system, when Creosote and Prussic Acid fail to do so: these should be tried should there be occasion for them, the former in 5-drop doses, taken in thin Mucilage, and the latter in 1-drop doses in plain Water, or effervescing draughts. If the bowels are confined, place 5 grains of Calomel, with the same quantity of prepared Chalk on the tongue, and let it be swallowed with the drink; then administer enemas every two or three hours until the bowels act, fomenting the abdomen

with flannels dipped in hot water, and applying thereto, if needed, a large mustard poultice. If there is diarrhoea, give a compound Chalk Mixture something like this:—Prepared Chalk, 2 drachms; Powdered Gum Acacia, 1 drachm; rub down with oil of Cinnamon, 12 drops; add Tincture of Opium, $\frac{1}{2}$ a drachm; Tincture of Cardamums, $\frac{1}{2}$ an ounce; take two table spoonfuls every three or four hours. If there is great prostration of strength, give, as soon as the stomach will bear it, about 30 minims of Laudanum, in Brandy and Water, or Chalk Mixture; or an effervescing Saline Draught to which 20 minims of Aromatic Spirits of Ammonia has been added; or a couple of grains of Opium with double the quantity of Calomel, accompanied by such drinks as the above; if this is rejected an opiate enema may be tried, say a drachm of Laudanum in a pint of thin Mucilage; apply warmth to the surface of the skin and put the feet in a mustard foot-bath. When the patient is recovering, let him have perfect rest, and a farinaceous diet, with Beef Tea or Chicken Broth. Stimulants should be cautiously and sparingly given, and the return to a more generous diet be very gradual. Bitter tonics, such as Gentian, and Calumba, or Cascarella, will also be found useful.

Bilious Temperament. Its characteristics are strength of frame and determination of purpose; there are generally strongly marked features, and plenty of colour in the face; dark hair and eyes, and a steady unwavering glance; there is a full strong pulse, not often very quick, except under the influence of excitement. These are the sort of men who accomplish great things in this world; they are not deterred by slight obstacles, but go steadily forward in spite of them. The biliary secretion with them is plentiful but not redundant; the disorders to which they are most liable are those of the digestive organs, and *Hypochondriasis* (which see), also *Temperament*.

BINDER. This is the bandage which is put round the abdomen of the mother at the commencement of labour. It should be sufficiently broad to envelope the whole of the lower part of the body; it may be a light table cloth or shawl, or a square of calico, folded like a cravat, so that while it spreads over and supports the belly, the ends may be brought round and tied in a double knot at the back. It should be outside of the bed dress, so as to be quite under the control of the nurse, who will have occasion to tighten and loosen it several times during the progress of the delivery; at first it should be tied so as to give moderate support to the

abdomen without painful pressure ; as parturition progresses, it should be gradually tightened, and when the birth has taken place, as much more so as can be borne with comfort. The regulated pressure which it exerts, no doubt assists the efforts of the womb to expel the fœtus, and the mechanical support which it affords, when the abdominal cavity is suddenly emptied, does much to obviate the sensation of utter exhaustion and faintness, which is sure to ensue ; and if it is arranged previous to the delivery, there is no necessity for disturbing the patient, a matter of great importance in cases of flooding or hæmorrhage. An hour or two after the completion of labour, this bandage may be exchanged for the ordinary broad band, drawn tight, and fastened with pins, or better still, straps and buckles. See *Child-birth*.

BISTORT (Snakeweed), botanical name, *Polyginum Bistorta* ; natural order, *Polygonaceæ*. An astringent root, used in mucous



discharges, passive hæmorrhages, and fluxes. Combined with the bitter and aromatic Flag-root (*Calamus*), it has been successfully exhibited for the cure of intermittent fever, and ague. The dose of the powdered root is from 1 scruple to a drachm ; of the de-

coction, from 1 ounce to 2 ounces. The decoction is also used as an astringent gargle and injection. Its active principles are *Tannin* and *Gallic Acid* (which see).

BISMUTH (SUB- OR TRISNITRATE). This preparation is a heavy, white, inodorous, and tasteless powder, composed of Oxide of Bismuth in combination with Water and Nitric Acid. Its medical properties are tonic and antispasmodic ; and it is especially useful in painful affections of the stomach, such as *gastralgia*, *cardialgia*, and *pyrosis* (which see.) It is useful also in checking the diarrhœa which attends typhus fever and consumption. In large doses it acts as an irritant poison, but it seems probable that this effect may be attributed to the presence of Arsenic, which it is likely to contain, unless great care is taken in the purification of the metal to be employed. In chronic dyspepsia this preparation may be given with good effect, combined with Rhubarb or Extract of Hops ; in obstinate vomiting, it frequently acts beneficially, and has been recommended for cholera ; if given in a mixture, it should be suspended in Mucilage ; the usual dose is from 3 to 10 grains, two or three times a day ; it should be taken after meals.

BISTOURY (French *bistoir*). A small curved knife, used for opening abscesses, and for other surgical purposes.

BITTER. Applied to a class of medicines having a hot acrid taste, and mostly tonic properties (see *Tonics*). Some purgatives also, are intensely bitter, and are distinguished as such by this prefix ; thus we have Bitter Aloes (see *Aloes*) ; Bitter Apple or Cucumber ; Coloquintida or *Colocynth* (which see) ; *Bitter-sweet*, Latin *Dulcamara*, *Woody Nightshade* (which see) ; Bitter *Extracts*, and Bitter *Infusions* are those of Gentian, Calumba, &c.

The stimulating and strengthening drinks known as *Bitters*, are spirits in which some bitter herbs or roots have been steeped.

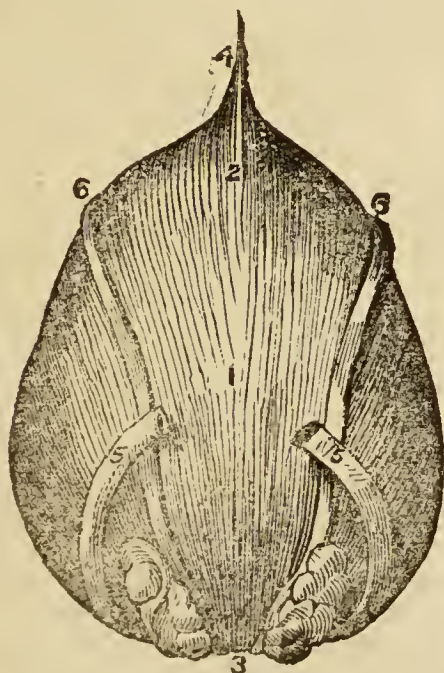
BLACK DROP. This is a preparation of Opium, about three times the strength of the common Tincture, or, as it is usually called, Laudanum ; it was formerly a nostrum whose composition was kept a secret, but is now pretty generally known to consist of Opium, Verjuice, or Acetic Acid, Nutmeg and Saffron, Sugar and Yeast. Such are the ingredients of the Lancashire Black Drop, as it is called, but there are other formulas which we need not give. Those who prepare it now, would probably use Morphine, which is devoid of some of the stimulating properties of Crude Opium. See *Opiates*.

BLACK DRAUGHT. To this well known preparation frequent reference will be found in these pages; it is a mixture of Infusion of Senna with Epsom Salts, and Ginger, or Carraway, or some other aromatic, to correct its griping tendency. In most cases where a Saline Aperient is required, this may be safely administered; it is a certain and active purgative, well suited for those of a full and vigorous habit, but not for weakly constitutions; the best time to take it is early in the morning.

BLACK VOMIT. The black or dark brown substance cast up in certain diseases, resulting from excessive secretion of *Bile* (which see), and *Bilious Fever*.

BLACK WASH. A lotion made of Calomel and Lime Water, in the proportion of $\frac{1}{2}$ a drachm of the former to 6 ounces of the latter; a common application to venereal sores, and ulcerations of a syphilitic character. See *Syphilis*.

BLADDER. A thin membranous bag, which serves as a receptacle for the urine, secreted by the kidneys, until it is voided through the urethra. This organ is situated in the *pelvis*, just below the *pubic bone*; when much distended it rises above this into the abdomen: it is composed of four distinct layers, or coats, viz.: the external, or serous, muscular, areolar, and mucous, this latter being the lining membrane. The bladder is angular in shape, and flattened against the pubis, when empty; when full, a longish oval, as shown in the annexed diagram.



It is divided by anatomists into *body*, *fundus*, *base*, and *neck*; the first, comprehending the middle part of the organ (1); the second, the upper segment (2); the

third, the lower and broader portion which rests upon the rectum (3); and the fourth, the constricted part, which in the male communicates with the prostrate gland, forming a passage into the urethra. The bladder is retained in its position by ligaments, which may be divided into true and false; altogether there are ten of them—five of each. See *Ligaments*.

In the preceding cut, which represents the posterior aspect of the male bladder, with the serous covering removed to show the muscular coat by which the contraction is effected; 5 5 are the membraneous canals, called *ureters*, through which the urine passes from the kidneys into the bladder; 6 6 are the *vasa deferentia*, and 7 7 the *vesiculae seminales*, both of which are connected with the organs of *Generation* (which see). The triangular area enclosed between these vesicles and a line drawn from the upper edge of each, and the figure 3, representing the base, is called the *trigonum vesicae*, and is the part which is pierced in puncturing the bladder through the rectum; to this extent the bladder is enfolded by the *Peritoneum* (which see). The ureters, which extend from each kidney to the back of the bladder, pass through the coats of this organ obliquely, so that when it is distended there is no return of the fluid. In the female the prostrate gland is absent, and the urethra, which in the male is about nine or ten inches long, and considerably curved, is short and straight. We will now proceed to speak of the diseases to which this organ is subject, and which in many instances are caused by negligence, or inattention to the periodic desire to void the urine.

Inflammation of the Bladder may be either acute or chronic; in the former case it is likely to be the result of a catarrh, which, after affecting the mucous membrane of the throat, nose, and chest, acts upon that of the urinary organs; if not from this, it may proceed from some accidental or local cause. But however this may be, the *symptoms* are much the same; there is severe pain and a sense of tightness in the lower part of the abdomen, with a constant desire to pass urine, which comes out cloudy or milky, and deposits pus or mucus at the bottom of the vessel; there is often, too, a feeling of sickness, and generally more or less of fever.

The *Treatment* in this case will be to give at once about 5 grains of Calomel, following it up with a Rhubarb draught, or some other mild aperient; the application of leeches to the lower part of the abdomen, with the use of a warm hip bath, to en-

courage the bleeding, the bath to be continued daily, or twice a day, if necessary; the use of diluents, such as Barley Water, or Linseed Tea, and abstinence from all stimulating drinks whatever: these means, with a rigidly abstemious diet, and rest in a recumbent position, will generally reduce the inflammation in the course of a few days; should they not, and should the patient be of a full habit of body, bleeding from the arm may be resorted to, and such other measures of depletion as may be necessary. The following is a good formula for a mixture: Nitrate of Potash and Tincture of Henbane, of each 2 drachms; Liquor of Acetate of Ammonia and Mucilage of Acacia, of each 1 ounce; Camphor Mixture 10 ounces: take 2 table-spoonful every four hours. Injection of the bladder with warm water, or some emollient fluid, such as Infusion of Linseed, is sometimes resorted to with good effect. The suppression of urine, and consequent distension of the bladder, will sometimes cause inflammation of that organ; or it may proceed from a calculus of considerable magnitude lodged within it. See *Cystitis*.

If the inflammation be chronic, leeches are seldom required; in other respects the treatment must be much the same as that above recommended. When this treatment does not afford relief, and the urine retains its acid quality, which may be known by its turning litmus paper red, $2\frac{1}{2}$ grains of Calomel, with 3 grains of Opium, should be taken three times a day; if the urine is alkaline, and deposits mucus of a brownish colour, the patient should take with each dose of the above mixture 15 minims of Wine of Colchicum: this is Sir B. Brodie's plan of treatment. Great care should be taken when the patient is recovering, as to the diet, and mode of living; a very slight excess in eating or drinking, or violent exertion, may bring on a relapse. It is well to take, for some little time, one of the following pills twice a week: Blue Pill, 12 grains; Ipecacuanha Powder, 3 grains; Acetous Extract of Colchicum, 6 grains; mix and make into 6 pills; an aperient draught of Compound Infusion of Senna, or of Rhubarb and Magnesia, should also be taken occasionally. If there is much debility, with griping and flatulency, a tablespoonful of Brandy in a glass of Soda Water will be a good accompaniment to the daily dinner.

Irritation of the Bladder. It sometimes occurs during the latter stages of gonorrhoea that the patient is annoyed by a frequent desire to void his urine; gradu-

ally this desire becomes more urgent and continuous, returning as often as every ten or fifteen minutes; there is great pain during the passing of the water, and heat, extending up to the neck of the bladder; if this state of things continues the urine will be tinged with blood, and will deposit bloody mucus; this indicates *ulceration* of the organ, arising from the irritated state of the mucous membrane. The proper *treatment* in this case will be, to keep the bladder in a state of rest by the insertion of a short flexible catheter, retained in its place by a bandage carried between the thighs, through which the urine may escape as it collects. To allay the pain and irritation, Opium in 1 or 2 grain doses should be administered, and a suppository, composed of 5 or 6 grains of the same, introduced into the rectum: the bowels must be kept open by Castor Oil; and a blister applied to the pubes to produce counter irritation, is likely to afford relief. A recumbent position should be maintained, warm hip baths used, and an abstemious diet preserved, avoiding malt liquor and all kinds of stimulants. There is a plain distinction between this form of urinary disease and stone, or calculus, in the circumstance that, whereas with them the pain is most excruciating when the bladder is empty, it is most so with this when it is full. An irritable state of the bladder may be brought on by other causes than that above indicated; such as a too long retention of urine, excessive indulgence in venery, or spirituous liquors, &c.; but in all cases the treatment should be much the same, varied, of course, according to the constitution of the patient, and the exigencies of the particular case. See *Strangury, Stricture*.

Paralysis of the Bladder may be caused by fever; it sometimes occurs in persons of advanced age, as well as in those affected with a paralytic affection: the organ loses its voluntary power to expel the urine, which must be drawn off by means of a catheter; general and uterine stimulants must be administered, especially blisters to the loins, and a pill, composed of 5 grains of Chio Turpentine, and a $\frac{1}{4}$ of a grain of Powdered Cantharides, given twice a day, is a mode of treatment which has been found effective. It has been observed, that the urine, which on the introduction of the catheter to the patient in a horizontal position would not flow, has done so when he has been placed erect; a circumstance attributed to the pressure of the viscera upon the bladder.

Rupture of the Bladder. This sometimes occurs in consequence of external violence; it results in an escape of the urine into the abdomen, leads to violent inflammation, and generally terminates in death.

Bursting of the Bladder may be a consequence of great and protracted distension; perhaps the sloughing of an aneurismal tumour; of course the effect is the same as in that of a rupture, and the *treatment* similar. Little more can be done than to pass a catheter into the bladder and let the urine flow out; keep the patient perfectly quiet, and administering opiates to reduce the pain, with stimulants, such as Brandy, to support the system under the extreme vital depression which invariably follows the occurrence of this accident: only a qualified surgeon can judge of the means to be pursued in this case; and, indeed, in all affections of the bladder the assistance of such should, if possible, be obtained.

Tapping, or Puncture of the Bladder, is a means of relieving the organ when all other means have failed; we need not describe the operation, because it is not one which could under any circumstances be attempted by other than a qualified person: the scientific term for it is *Paracentesis Vesicæ*.

For *Wounds in the Bladder*, see *Wounds*; for *Stone in the Bladder*, see *Calculi*.

Painful and incurable affections of the bladder, in females especially, are often brought on by long retention of the urine from motives of delicacy. In this country there is a great deficiency of public urinals and accommodations of the kind, and the consequences are often very serious. Better attention has been paid to these matters of late, but they are still very far from sufficient for the wants of the community. Women who are travelling often find it extremely difficult to obtain the convenience they require with sufficient privacy, and one cannot wonder that they should, commonly, rather suffer present annoyance and pain, and incur risk of future disease, than outrage their natural modesty and sense of propriety. Frequently in old age, or in an extremely debilitated state of the system, the muscles which compress the bladder become so relaxed that they can no longer force out the fluid, or constrict the passage through which it passes, so as to retain it until the proper time for voiding it arrives; it is, therefore, constantly trickling through the urethra, to the great discomfort and annoyance of the patient, or else it is retained until drawn off by the catheter, an operation which has to

be repeated very frequently. If age is the cause of this, little can be done beyond providing the patient with a portable *urinal* of which we shall have to speak when we come to *urine*; if it arise from debility, not the result of lengthened years, strengthening medicines, good diet, cold hip baths, sea bathing, &c. should be resorted to, with stimulating applications to the loins. For *Incontinence*, and *Immoderate flow of Urine*. See *Diabetis, Urine*.

BLAINS or BLEBS. Most medical writers include these under the head of *Vesicular eruptions*, they being large vesicles which make their appearance in the skin: there are three varieties distinguished as, 1st, *Pemphigus*, which chiefly occurs in young children and infants, in close crowded localities; they indicate a weakness of the system resulting from want of proper food, insufficient clothing, &c. The blains, which appear like the scab arising from a burn or scald, are usually on the arms and upper parts of the body, they are not accompanied by much fever nor constitutional derangement of any kind; after a week or so they die away, and fresh crops come out at uncertain intervals. 2nd, *Pompholyx*, attacks children of riper years, and sometimes grown persons of a weakly habit of body, they very much resemble the last in all respects except size, being considerably larger and more numerous. 3rd, *Rupia*, although commonly called vesicular, is more like a pustular eruption; true, it first appears in the form of vesicles containing lymph, but this soon alters its character, and changes into unmistakeable pus, forming an unhealthy ulcer, which keeps extending layer upon layer, until it exactly resembles a limpet shell. When the scabs have risen to a considerable height they usually get rubbed off, but over the raw and inflamed ulcer a fresh crust is speedily formed, which, however, does not attain so regular a shape, and perfect resemblance to the above-named shell as the first. It is by this resemblance that this particular kind of eruption is distinguished from all others. The scabs here are not at all numerous, and they are generally confined to the extremities.

The *treatment* of these three forms of eruptive disease should be much the same; they are evidences of debility, and, therefore, demand a strengthening diet with tonic medicines; change of air, sea bathing, gentle exercise, &c., will greatly assist other remedial means. Attention should be paid to the biliary secretions, and small doses of Mercury given in combination with Rhubarb, if there is any irregularity in

them. Citrate of Iron in combination with Quinine, and an aromatic tincture such as that of Cardamums, will make the best mixture; a little alkaline such as Bicarbonate of Soda, or Potash, may perhaps be added with advantage.

BLEA-BERRY. More generally called Bears' Whortleberry; botanical name *Arbutus*, or *Aretostaphylos Uva Ursi*, a small evergreen shrub of the natural order *Eriaceae*, whose leaves are powerfully astringent, containing, it is said, as much as 36 per cent. of Tannic Acid. It appears to exert a specific influence on the kidneys, is chiefly given in the later stages of chronic inflammation of the bladder, and has been found useful in cases of irritation of that organ, owing to the presence of *Calculi* (which see). Of the Powder from 1 scruple to 1 drachm may be given every four hours; of the Extract, from 5 to 10 grains at bed time; of the Decoction from 1 to 2 ounces, three times a-day; and of the Syrup from 1 drachm to $\frac{1}{2}$ an ounce. This latter preparation is not a pharmaceutical formula, and is but little known or used. See *Uva Ursi*.

BLEAR EYE. See *Eye*, *Lippitudo*.

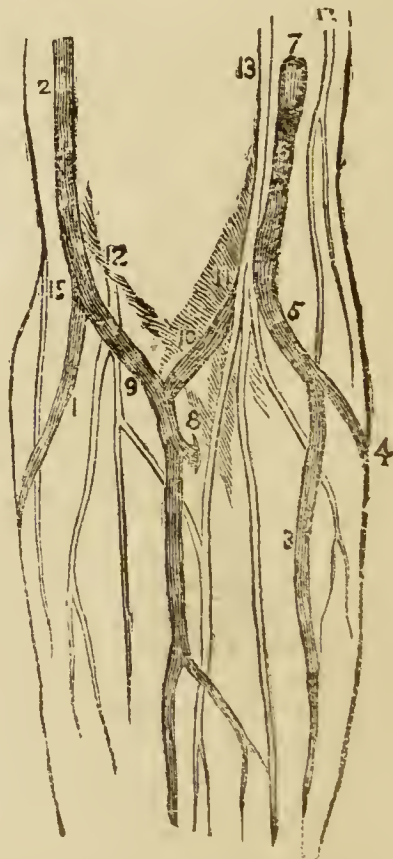
BLEEDING.—In the "good old times," when every village had its barber surgeon, one of the most lucrative branches of his profession was bleeding, at one shilling per head, or rather arm, that being the part which was most commonly, as it is now, operated on. Nearly all the pains and aches and unpleasant feelings to which poor human nature is liable, were then attributed to an over quantity, or bad quality, of the blood, and people seemed to consider it a kind of sanatory duty to have a vein opened at least once a year. Phlebotomy was the order of the day, and blood-letting prevailed in the land to an almost alarming extent. In modern practice the lancet is to a great extent laid aside. Dr. Lettsom's motto

"I phisics 'em, I bleeds 'em, I sweats 'em,
And if they *will* die, I let's 'em."—(J. LETTSOM.)

is not adopted in all its integrity by those who now exercise the healing art, nor are the garments of Esculapians literally "rolled in blood," as they formerly were. Some contend that this free outpouring of the vital fluid was necessary in the former state of the British constitution; the John Bull of our day, they say, is a different being altogether from the sturdy, choleric, full-blooded individual of a century or two ago; and as a proof of this, they advance this fact, that we are not so ready to quarrel and fight as we were: it may be so, although there have recently been symptoms of a re-

turn to the old system; but, whether or no, we have only to do with the fact as it stands, and to point out to our readers how the operation of bleeding is to be performed when circumstances render it really necessary. It should always be borne in mind that bleeding is in itself a dangerous operation, putting aside the consideration that the abstraction of so much blood from the system may produce serious mischief; it should, therefore, never be lightly resorted to, nor performed by other than a skilful surgeon. Cases, however, may occur in which it is necessary to bleed in order to arrest active inflammation, or to stay the progress of an apoplectic or other fit, where professional assistance cannot be obtained; it is therefore well for persons to be informed as to the best modes of operation.

Bleeding from the Arm is the most common mode of depletion practised; the veins there are generally so prominent and accessible, that the veriest tyro in surgery can usually manage to open them, and abstract the desired quantity of blood, although from his ignorance of the anatomy of the part, he may chance to wound a nerve or an artery, and so do serious mischief. The subjoined cut will assist our unprofessional readers in understanding the relative position of these

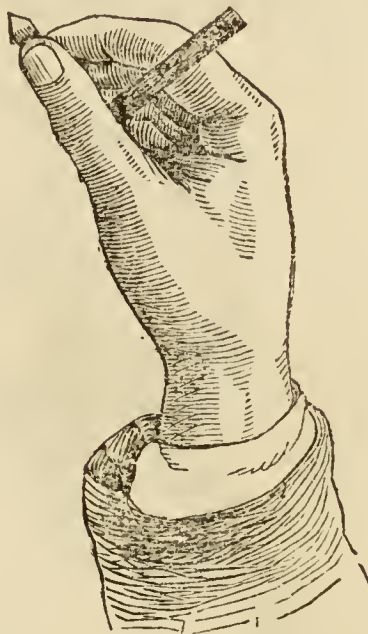


organs, and, perhaps, enable them to proceed with some confidence should they be called on to operate with the lancet.

This diagram exhibits the principal veins

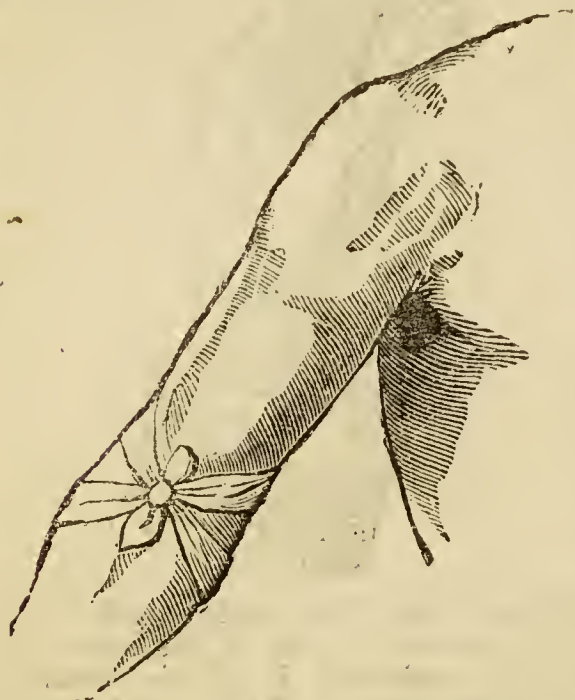
in the forearm and bend of the elbow: No. 1 is the Radial Vein; 2, the Cephalic; 3, the Anterior Ulnar; 4, the Posterior Ulnar; 5, the Trunk, formed by their union; 6, the Basilic, which at 7 penetrates the deep fascia; 8, point of communication between the deep veins of the forearm and the upper part of the Median; 9, Median Cephalic; 10, Median Basilic; 11, a convexity of the deep fascia, formed by the Brachial Artery; 12, External Cutaneous Nerve, which pierces the deep fascia, and dividing into two branches, passes behind the Median Cephalic Vein; 13, Internal Cutaneous Nerve, dividing into branches, and passing in front of the Median Basilic; 14, Inter-costo Humeral Nerve; 15, Spiral Cutaneous Nerve. By this it will be seen that three veins pass up the inner part of the forearm, the middle one, when it has nearly reached the bend, dividing into two branches; it is near this point of division of the Median Vein into Median Basilic and Median Cephalic, that, on account of its greater prominence, the lancet is frequently inserted; but it should be borne in mind, that directly below the upper portion of this lies the Brachial Artery; and that, the Internal and External Cutaneous Nerves send their minute branches close up on either side, those of the former passing before the Median Basilic, and those of the latter behind the Median Cephalic Vein; these considerations should induce great caution, as an *aneurism* might result from puncturing the artery, and *neuralgia*, from a similar accident to either of the nerves. It is the safest plan, if the vein is at all prominent, to open the Median Vein before it divides, or the main channel of the Ulnar; but, in either case, the method of procedure would be this:—Pass a broad piece of tape twice round the arm, about three inches above the elbow, pull it moderately tight, and tie in a bow on the outside; there should have been previously got ready, a small piece of lint, moistened, and folded up into several thicknesses, a porringer or basin, to catch the blood, a broom handle or other stout stick for the patient to grasp, a wet sponge, and a piece of broad tape, about a yard and a half long, also a lancet, which should be perfectly clean and sharp. With the left hand grasp the patient's arm, and straighten it out, to make the veins as tense and prominent as possible; then pressing the thumb of this hand upon the vein at a short distance below the spot where the opening is to be made, and holding the lancet between the finger and thumb of the other hand, as represented in the subjoined cut, and steady-

ing the hand by means of the three disengaged fingers, press the instrument into the vein, and give a slight cut upward in withdrawing it, so as to make an opening



sufficiently large for the blood to flow out in a thin stream, which, if the operation is properly performed, it will do steadily, as soon as the pressure of the thumb upon the vein is withdrawn, and perhaps before. From twelve to sixteen ounces is the quantity of blood usually abstracted; it should be ascertained beforehand how much the basin or porringer will hold. When it is sufficiently full, again pressing the thumb on the vein just below the opening, loosen the bandage above the elbow, sponge off any blood there may be about the cut, bring the edges together, and place over it the folded piece of lint previously prepared, press the thumb upon that, and then proceed to bandage thus: lay the tape obliquely across the wound, pass it round the arm above the elbow, and bring it back again over the same spot, then let it go round the arm below the elbow, and returning, let the two ends be tied in a secure bow, in the bend of the arm, with the free movement of which the bandage should not be tight enough to interfere, although it must be sufficiently so to retain its position. This mode of bandaging is called the figure of 8, from its resemblance to that figure; the following cut will probably make our explanation clearer. A skilful operator will make a sufficiently large and clean opening for his purpose, yet not always will the blood flow freely; should it not, direct the patient to take hold of the stick before-mentioned, and by alternately tightening and loosening his grasp, he will give an impetus to the flow of blood, and so facilitate the completion of the operation;

which is more effective if performed quickly. The bandaging can be performed more readily if the patient's arm is kept partly extended, resting upon the bleeding-stick; when the bandage is properly tied, the arm



can return to its natural position, and in about twenty-four hours may be relieved of all pressure; until the expiration of this period it should be kept quiet, but should any extra exertion cause the slipping of the bandage, and the blood burst forth afresh, it may be easily stopped by pressure, applied as above directed. During the flowing of the blood, both the countenance and the pulse of the patient should be carefully watched, and should the former become pallid, and the latter diminish in force and frequency, it will be necessary to complete the operation. If faintness is complained of, this must be done at once, and a recumbent position should be assumed.

Bleeding from the veins of the leg and the neck is sometimes practised, but only the skilful surgeon would think of attempting this; the latter part is only operated on in young children, in whom the veins of the arm are hidden in fat; it is, however, a difficult operation, and attended with considerable risk, and the object, moreover, can generally be attained by means of *Leeches* (which see), also *Cupping*, and *Scarification*, all modes of what is called *topical* blood letting; that is, the abstraction of blood with the view to diminish the quantity in some particular part, which may be the seat of disease; whereas *general* blood letting is resorted to with a view to diminish the whole mass of the circulation, and to deplete, or reduce the system. The

opening of a vein for this purpose is termed *Phlebotomy*, or *Venesection*; the opening of an artery, sometimes resorted to in *Apoplexy* (which see), is termed *Arteriotomy* (which see).

The *accidents* likely to result from bleeding are, 1. The formation of a small tumour round the orifice, occasioned by the blood insinuating itself into the cellular tissue while it is flowing out of the vessel; it forms very rapidly, and sometimes impedes the abstraction of the blood; a change in the posture of the arm will frequently prevent its enlargement, and a removal of the bandage will generally do so. Should a sufficient quantity of blood not have been taken, another vein in the same, or the opposite arm may be opened. See *Ecchymosis* and *Thrombus*. 2. Inflammation of the Integuments and suppuration of the Cellular Tissue in which the vein lies. This is sometimes caused by a bad lancet, which does not make a clean cut, but rather lacerates; and it will be especially likely to ensue if there be great irritability of constitution; unsteadiness of the arm during the operation, or want of care in bringing the edges of the wound properly together, will also tend to produce this. *Treatment*. Keep the arm at rest in a sling, apply Sugar of Lead lotion, give mild saline aperients, and if suppuration ensues poultice with Bread and Water. 3. Inflammation of the Absorbents; often occasioned by motion of the arm soon after bleeding; indicated by swellings over the course of the larger vessels, with pains shooting from the point of venesection up and down the arm; there is much inflammation at the opening of the vein, and finally, suppuration. *Treatment*. Same as above, with the free application of the lancet to the wound, should it assume the character of an abscess. 4. Inflammation of the Vein. This is likely to arise when the edges of the wound made by the lancet do not readily unite; it may vary greatly in degree, extent, and progress, and the treatment, although in the main similar to that above recommended, will accord with the peculiar circumstances of the case. Care should be taken to prevent the inflammation from extending along the membranous lines of the vessel to the heart, by placing a compress over the vein a little above the puncture.

5. Inflammation of the Fascia of the Fore Arm, a consequence of an inflamed state of the vein where punctured; the whole arm becomes stiff and painful, the joints cannot be moved, nor the fingers extended, without much suffering; the en-

largements are sometimes affected with a kind of erysipelas; there is swelling of the arm, and a considerable degree of fever in the system. In about a week, a superficial formation of matter takes place, for which a way of escape should be made; it will probably form again and require a second, and perhaps a third, opening, but eventually is quite got rid of, and the patient gradually recovers the use of his arm. The *treatment* the same as usual in inflammatory diseases; in the latter stages, friction for the fingers, elbow joint, and fore arm, with Camphorated Mercurial Linament; and, if necessary, extension by means of a splint.

6. Wounded Nerves. This is known by a sensation of acute pain in the parts which the particular nerve supplies, such as is felt in Tic Doreux, and other neuralgie complaints; in some instances violent convulsions have ensued, and other symptoms attributable to nervous irritation. If anodynes do not succeed in allaying this, a complete severance of the injured nerve is recommended; and this, of course, only a surgeon would attempt.

BLEEDING AT THE NOSE. Persons of a sanguine temperament, and full habit of body, are most subject to this disease, we were about to say; but perhaps it ought rather to be regarded as a salutary provision for the relief of the overcharged system. If it does not run to a weakening extent it is very questionable whether it should be interfered with. Those who are troubled with vertigo and headache, arising from a fulness of the veins and a tendency of blood to the head, know how much better and lighter they feel after a good bleeding from the nose; and there can be no doubt that many a fit of apoplexy has been averted by it, and many an attack of inflammatory fever, or inflammation of the brain. This bleeding may arise from several causes, among which may be named violent exercise, great heat, blows on the part, the long maintenance of a stooping posture, and a peculiar smallness of the vessels which convey the blood to the brain, rendering them liable to rupture; it may come on without any previous warning, or be preceded by headache and a sense of heaviness, ringing noises in the ear, heat and itching of the nostrils, throbbing of the temporal artery, and accelerated pulse. When it comes on too frequently and continues long, so as to cause faintness, and especially if the person subject to it be of a weakly habit or advanced in years, it should be stopped as soon as possible. The stoppage may sometimes be effected by immersing the head in

cold water, free exposure to cool air, and drinking cool acidulous liquids; the body of the patient should maintain an erect position, with the head thrown somewhat back, a key or other cold substance be applied to the spinal cord, vinegar be snuffed up the nostrils, or an astringent wash injected with a syringe; it may be composed as follows:—Alum and Acetic Acid of each 2 drachms, Water 6 ounces; or 3 drachms of the Muriated Tincture of Iron in the same quantity of Water; or if these fail, the nostrils may be plugged with lint dipped in a strong solution of the Sulphate of Copper; or the lint first moistened, and then dipped in finely powdered Charcoal. When the bleeding has stopped there should be no haste to remove the clotted blood from the nostrils; let it come away of itself; do not blow the nose violently, nor take stimulants, unless there be excessive faintness, in which case a little cold Brandy and Water may be taken. Where there is a full habit of body, cooling medicines, low diet, and leeches to the temples, may be safely advised, with perhaps occasional bleeding from the arm. See *Hæmorrhage*.

BLEPHARIN (Greek, for the Eyelid). Hence the compounds—*Blephar-Ophthalmia*, Inflammation of the Eyelid; *B.-ptosis*, a falling of the upper Eyelid; *Anklyoblepharon*, an unnatural union of the two Eyelids; *Pachy-blepharosis*, a thickened state of the Eyelids; *Sym-blepharin*, the connection of the lid to the globe of the Eye.

BLIGHT, a kind of palsy affecting one side of the face, the nerves of which lose their power; it is caused by sudden cold or damp. See *Palsy*.

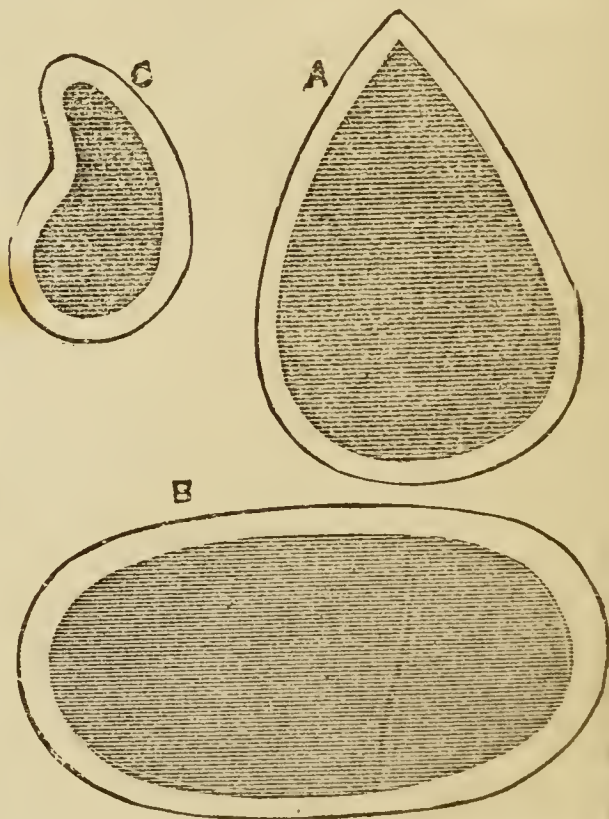
BLINDNESS. Deprivation of sight may proceed from various causes, such as one of the diseases which affect the eyeball, (see *Ophthalmia*,) or deficiency of power in the optic nerve, local or general paralysis, or any disease whose seat is in the brain or the nervous system; the formation of a speck on the eye, or of a film over the lens. (See *Amaurosis*, *Cataract*.) Sometimes the affection of the brain or nerves, from which loss of sight proceeds, is sympathetic, arising from a disordered stomach; in this case, as in many others, it is but transient; and matters may be set right by a Blue Pill and Senna Draught, with low diet, and avoidance of the exciting causes of the disorder. If these do not have the desired effect, a surgeon should be consulted, as there is reason to suspect some organic mischief. Leeches on the temples, blisters behind the ears, cupping in the neck; either, or all of these may be tried should there be a sense of

fulness, headache, or giddiness accompanying indistinctness of vision; in this case, too, more powerful medicines, such as Colocynth and Calomel Pills, should be taken, and a course of depletion vigorously carried out.

Proceeding, as blindness does, from such a variety of causes, few general directions can be given for its treatment: when it is owing to a change in the structure of the eye itself, its approaches will be very gradual, unless this change is the result of active inflammation. Temporary loss of sight is a frequent symptom of *Apoplexy* (which see). It also results from diseases of exhaustion, and sometimes occurs after copious bleeding; its total loss may be effected by a blow on or about the region of the *Eye* (which see). For the blind from birth there is no hope of recovery. See *Sight*.

BLISTERS (Latin *vesicatoria*, from *vesica*, a bladder, sometimes called *Epispastics*, which see). A Blister is an application to the skin, producing a discharge of the thin watery matter called *Serum*, or of thicker matter called *Pus* (both of which see), by exciting acute inflammation. The chief blistering agent used by medical practitioners in this country is the Spanish Fly, of which an account will be found under the head of *Cantharides*. But the application of any highly-irritating substance will produce the same effect, which is in truth an effort of nature to protect the acutely sensible true skin from the action of the irritant, by interposing between it and the outer skin, or scarf, a bag or vesicle of fluid; thus we see, that after scalds and burns, bladders of serum arise. Steam, strong Ammonia, Mustard, Horseradish, Croton Oil, Tartar Emetic, and many other applications, will excite this inflammatory action, and cause the formation of a blister, but scarcely any so speedily and effectually as the agent first named, which is generally applied in the form of a plaister—the *Emplastrum Cantharides*, or *Lyttæ*, of the Pharmacopœia—although this comparatively clumsy and inconvenient mode of application is now being rapidly superseded by one more light and elegant, and cleanly, called *Cantharidine*, or *Blistering Tissues*, which is silk, or some other convenient material saturated with the active principle of the Fly, obtained by distillation in Ether. This has only to be cut to the requisite size, placed on the part, and kept close to it for a few hours; it may be obtained of any druggist. There is also an Extract prepared by evaporating a tincture composed of 4 parts of the Flies to 1 of strong Acetic Acid

and 16 of Rectified Spirits; and *Acetum Lyttæ*, formed of the above acid and the insects. The latter preparation has merely to be applied with a camel-hair brush; it is very speedy in its operation. The old and still generally-pursued method is to spread the Blister Plaister pretty thickly on leather, adhesive plaister, calico, or linen, and place it on the part affected, putting a handkerchief round to keep it close to the skin; in ten or twelve hours it ought to produce the desired effect; it may then be taken off, the vesicle clipped with a pair of sharp scissors to let out the fluid, which should not be suffered to run down the body, as it will produce painful excoriations; keep the blister dressed with Spermaceti or Elderflower Ointment, until healed. Sometimes a little of the powdered Fly is sprinkled over the outside of the plaister when spread, and previous to its application, and sometimes a few grains of Tartar Emetic; these increase the activity of the application, but are apt to produce *Stranguary* (which see). Respecting the *shapes* and *sizes* of Blisters, we may just observe that these vary greatly in accordance with the parts to which they are to be applied. The following diagrams exhibit the shapes of those most in use—



A, for the chest, pointed end upwards, size 7 inches long by $5\frac{1}{2}$ at broadest part; B, for the side or loins, 8 inches long by 4 broad; C, behind the ear, 4 inches long by $2\frac{1}{2}$ at broadest part; this includes the margin, which should be left plain, or spread with

resin or some other adhesive plaister, that is, when the old Blister Plaister is used. For children, the same shapes are used, but reduced in size according to age and other circumstances. Sometimes very much larger blisters than these are applied, and of different shapes, adapted for particular parts of the body; but this is under the immediate direction of the medical attendant. The best time for the application of a blister is the evening, and as soon as it is on, the patient had better retire to bed, and if possible get to sleep. If at the end of twelve hours it is found not to have risen well, it must remain on longer. With persons far advanced in life, or who have a particularly dry skin, or are in a state of great nervous depression, sixteen, or even twenty hours may be required for the full effect of the irritant to be produced. The action may be assisted, and the removal of the plaister facilitated, by rubbing the part previously to application with Olive Oil, or by interposing a thin piece of muslin between the plaister and the skin; this, of course, refers to the old form of application. For children, and those who have tender and delicate skins, the action of a blister should be carefully watched, as the effect is often produced in a shorter time than is usually required. The plaister should be removed as soon as it begins to rise, and a warm bread poultice applied; under its influence the full rising will generally take place. When the vesicle is punctured, and the fluid emptied upon a cloth placed to catch it, allow the membrane to subside and apply the dressing; it is sometimes erroneously imagined that the rising has only taken place at one part of the vesicated surface, because a bladder only appears there; but a close examination will show that the bladder extends over the whole, but is only obvious at the lower portion, where the fluid has gravitated; sometimes, instead of one large bag, there are several small vesicles—these should all be clipped, unless very small. When, instead of watery fluid, the blister contains a thick pus, which does not flow out, there should be no squeezing to make it do so; it will gradually ooze out into the dressing, which may be Ointment spread upon Lint, as before mentioned, or Cotton-wadding, which has been recently employed with good results. But perhaps the most effective, as it is undoubtedly the most pleasant and elegant, is that called Brown's Tissue Dressing, which consists of a cerate evenly and thinly spread upon tissue paper; this adheres closely upon the vesicated surface, and forms as it were a second cuticle.

Sometimes a blister is popularly said to "get the fire into it," that is, it becomes hot and inflamed; in this case a cold bread-and-water poultice will generally give relief.

The custom of keeping blisters open by repeated applications of Savine Ointment, or some other irritant, although followed by many medical practitioners, is scarcely to be recommended. By its irritating effect upon the nervous system it frequently does much harm. The counter-irritation may be kept up by a succession of small blisters close about the same spot.

"Flying Blisters" are those which are taken off as soon as redness is produced: weak mustard poultices will answer this purpose. The non-rising of a blister frequently gives much alarm, it being a popular impression that the absence of susceptibility of the skin is owing to a deficiency of vital power; but very trivial causes will sometimes prevent the expected effect taking place.

Persons liable to affections of the Kidney should never be blistered, except with medical sanction. Much harm is often done by resorting too hastily to this method of obtaining relief in cases of fever and acute inflammation; by the irritation produced, the general symptoms are aggravated, without affording the expected amount of local relief. It is always best to consult a surgeon before making the application.

By all this it will be seen that blisters are chiefly useful as counter-irritants. They are applied over the seat of some active disease, as *Pneumonia*, *Gastritis*, *Hepatitis*, *Phrenitis*. They are also applied with good effect in spasmodic affections, as *Angina pectoris*, *Epilepsy*, *Catalepsy*, *Hysteria*, *Paralysis*, &c. (all of which see).

BLOOD (Latin *sanguis*). The fluid which circulates through the heart, arteries, liver, veins, &c., and is the source of animal heat, and the great active agent of vitality. It is obtained from the food by the processes of *Digestion* and *Assimilation* (which see), and its fitness for the purposes intended depends greatly upon the nature and quality of that food; it is therefore of importance that we should understand something of its component parts, and of the particular substances which are best adapted to impart to it the requisite conditions. Chemical analysis and the powers of the microscope have both been applied to an examination of this vital fluid, which consists of the *Liquor Sanguinis*, or Liquid of the Blood, which is transparent and nearly colourless, and holds in solution the fibrin, albumen, and mineral salts,

which constitute its animal principles; in this float the corpuscles, or globules, which are of two kinds, the red, which are much the more numerous, and the white, or colourless; it is the former which impart that sanguine tint which distinguishes the blood of most animals. These red globules are extremely minute, their average diameter being, it is said, about the 3,200th part of an inch; they consist of a membrane enclosing a coloured fluid, and under the microscope look like flattened discs with a depression in the centre; it has been observed that when drawn from the body they have a tendency to arrange themselves in rows. A different condition of the blood is known to exist during the time it is circulating in the system, and after it has issued from the vein or artery. Many of our readers may have noticed that a separation takes place, part becoming a thick solid mass, and part a thin almost colourless fluid, the former of these, which is called *clot*, is composed of a fibrous network involving the corpuscles, whilst the latter, termed *Serum*, is the *Liquor Sanguinis*, deprived of its fibrin, which has united with the thicker portion. By the relative proportions of these constituents, and their forms and appearances, the experienced eye can at once tell the condition of the body from whence they have been withdrawn. Thus, when the solid matter assumes a cup-like shape, and is covered with a buff-coloured fluid, active inflammation is indicated. It has been estimated that the proportion of solid matter in 1,000 parts of healthy blood is from 200 to 210, as follows: Albumen, 20; Corpuscles, red and white, 125; Fibrin, $2\frac{1}{2}$; Chloride of Sodium and Potassium, 4; Phosphates of Soda, Lime, Magnesia, and Iron, Sulphate of Soda, and Oxide of Iron, $2\frac{1}{2}=204$. Of these constituents we may briefly observe, that the *Albumen* is the material from which are elaborated most of the substances necessary to existence, the fibrin itself and the solid parts of the corpuscles included (see *Albumen*). The *red globules* appear to be chiefly useful in stimulating the muscular and nervous systems to a proper performance of their respective duties; their office is more connected with respiration than nutrition. To the *Fibrin* has been assigned the formation of the muscular and other fibrous tissues; this is the material which is most completely prepared for organisation, between it and albumen there is little apparent difference, and even by chemical analysis it is difficult, some say impossible, to detect any. The only obvious distinction

appears to be that, whereas the fibrin coagulates as soon as it is removed from the body, the albumen will only do so in a temperature of 150 degrees; it is a curious circumstance that in cases of death by lightning, or any active poison, this power of coagulation is lost; this would seem to indicate some chemical change affecting the vitality of the fluid. The *phosphates* and other *saline* constituents supply the materials for building up and repairing the bony frame and the several tissues; they also enter largely into the secretions, and serve the purpose of preventing the decomposition which would take place in the blood but for their presence.

By this combination of elements, nutrition is supplied to the various parts of the system, of precisely the kind that is required; fibrin for the muscles; fatty matter, phosphorus and albumen for the nerves; gelatine and earthy salts for the bones, and so on. Again, as to the secretions, the bile absorbs fatty matter and some other elements peculiar to it; urea and some of the salines enter into the urine; and to the composition of the milk in women go fat, sugar, albumen, &c. The abstraction of all these elements from the blood, in its course from the heart through the arteries, alters its composition, and renders it unfit for the purposes of life; it loses its bright red colour, and becomes dark and thick, laden with carbon, and in this state is conveyed through the veins to the lungs, where it gives out its carbonic acid, and takes in a fresh supply of oxygen, in the acts of inspiration and respiration, is passed on to the great reservoir, the heart, with all its vital properties restored, and is again pumped out through the arteries, to run the same course of usefulness, and return again, and again to receive a fresh commission from the "great monarch of the 'purple island,'" as the old poet Fletcher, has fancifully termed the human body. This beautiful arrangement must strike every one with admiration, who attentively considers it; it has been well said that "an undevout astronomer is mad;" no less truly might this be said of an undevout anatomist, for he has constantly before him the most wonderful adaptations, and proofs of divine power and goodness.

It will be seen by the above that, although in the process of depuration, that is, purifying or cleansing, which the blood undergoes, the liver, kidneys, skin, and mucous membrane, generally take an active part, yet the chief organs employed are the *Lungs* (which see).

With regard to the *Pathology of the*

Blood, we may briefly remark that in various diseases it presents aspects and combinations very different from those of a healthy state; thus in plethora, we find an increase in quantity; after hæmorrhage, or bleeding, of course a decrease; in severe inflammation and inflammatory fevers, the temperature which may generally be set at about 100°, rises to 120° or even 150°; in languid states of the system it falls considerably below the average; in states where the circulation is rapid it becomes redder than common from an excess of globules; pale from a deficiency of the same, in *Anæmia* (which see); and purple from defective oxygenisation in pneumonia, phthisis, pregnancy, and acute rheumatism. In uninfammatory fevers, cerebral congestion, scurvy, and inflammation of mucous membrane, the quantity is diminished, as is that of albumen in the serum in Bright's disease of the kidney, and of the salts in typhoid fevers and cholera. The blood, also, may be considerably changed in its character by the admixture of elements not natural to it, such as those of the different secretions or substances not contained in any of them, as sugar. The blood may, also, absorb its own morbid secretions; by it all contagious diseases are taken into the system, as are also poisons, such as alcohol, opium, lead, mercury, iodine, or arsenious acid (see *Poisons*), and thus it is often materially altered in its constitution, and rendered unfit for circulation.

It has been estimated that about 28 pounds is the average quantity of blood circulating through the system of a healthy adult: the principal states of disease incidental to this fluid are *Congestion*, caused by an increased quantity of blood in any organ, by the obstruction of any passage, the breaking away of cellular tissue, or the dilation or rupture of internal passages; cold applied to the surface of the body, or a dry state of the skin, will sometimes occasion this; if affecting the vessels of the brain, it is called *Extravasation* (which see).

Inflammation of the Blood may proceed from several causes: it consists of a dilated state of the small arteries and capillaries, into which, owing to increased action of the heart, more of the fluid is forced than in their natural state they will contain. See *Inflammation*.

Vomiting and Spitting of Blood. The first of these indicates a deranged state of the system; it may proceed from indigestion producing a plethoric state of the blood vessels of the stomach, the interruption or suppression of discharges, or a

diseased state of the blood, as in *Purpura* and *Scurvy* (which see); great exertions after a full meal, or external violence, may also give rise to this, or the passing of blood through the bowels, which may sometimes go on for some time without being discovered. The rupture of a vessel in the lungs may likewise occasion vomiting of blood, but this, called by surgeons, *Hæmoptysis* (which see), is generally attended with a cough, and the red fluid is spat up in a succession of mouthfuls; whereas if it comes from the stomach it is thrown up in one full vomiting, and is usually mixed with food. The treatment for this should be cold drinks, perfect rest, active purgatives; 3 grains of Calomel, or 5 of Blue Pill over-night, and a Senna draught in the morning to begin with; the purgatives should be repeated daily until the stools lose their dark colour, and, should the bleeding continue, give Spirits of Turpentine, about 20 drops, in cold water, every four hours, with a dessert-spoonful of Vinegar in water, or a draught containing 20 grains of Gallic Acid and 10 of Laudanum in a little Mucilage. Keep the patient low in diet until the bleeding has stopped, and then raise it, giving, also, light tonics and gentle aperients, if required.

If the bleeding is occasioned by *Amenorrhæa*, or *Piles*, treat as directed under those heads. For *Determination of Blood to the Head*, see *Apoplexy*, *Brain*, *Congestion*; for *Bloody Flux*, see *Dysentery*; for *Chronic Diseases of the Blood*, see *Anæmia*, *Cachexia*, *Chlorosis*, *Plethora*, *Serofula*. For *Blood-shot Eyes*, see *Eye*, *Inflammation*.

BLOODSTONE. Greek *Heliotropum*, a species of chalcedony, sometimes put down the back to stop bleeding of the nose; its coldness is its only virtue.

BLOWS. These are most frequently fatal when inflicted on parts immediately over a collection of nerves, as the region of the heart, the pit of the stomach, or the neck. A blow on the head may cause concussion of the brain, if it do not fracture the skull, which it may do if inflicted on the side of the temple where the bone is thin; one on the spine may fracture the vertebræ and cause paralysis of the lower part of the body, which may indeed occur without a fracture, but by reason of the shock sustained by the nervous system in its main channel of sensation. A deadly faintness generally follows the infliction of a blow which is likely to result seriously; for this, stimulants, such as Brandy, Ammonia, or Ether should be given; cold water dashed

on the spine should also be tried, and should this prove unsuccessful, and syncope ensue, a warm bed and artificial respiration must be tried, with hot flannels to the chest, Mustard plaisters to the spine, and Turpentine or other stimulant injections. See *Bruises, Contusions*.

BLUE DISEASE. Characterized by the blue or livid appearance of those parts which, in health, are generally red, and by languor and great susceptibility to cold. *Cause*—Some malformation of the heart, which prevents the proper arterialization of the blood in the lungs. This disease dates from birth, and the patient seldom survives infancy. Little or nothing can be done remedially.

BLUE EYE WATER. A solution of Ammoniated Copper, the *Liquor Cupri Ammoniaci* of the London Pharmacopœia. See *Eye, Copper*.

BLUE OINTMENT. Mercurial Ointment, of a blue or gray colour: official name *Ungentum Hydrargyri*. See *Mercury, Ointments*.

BLUE PILL or Mercurial Pill. *Pilulæ Hydrargyri*. See *Mercury, Pills*.

BLUE STONE. Blue Vitriol or Sulphate of Copper, *Cupri Sulphus*. See *Copper*.

BOILING. The "Family Doctor," it will be seen, sometimes takes upon himself to give advice in matters of domestic economy when they affect the important subjects of health and disease, and he would caution the cook never to let the water in which she puts her meat on the fire reach the point of ebullition—that is, about 212° Fahrenheit. That great authority, Liebig, says that 50° or 60° lower than this is quite sufficient to cook the meat, provided a sufficient time be given, and that, in this way, it will be more tender and easy of digestion, and consequently more nutritious, than if absolutely boiled—indeed, stewed would be the proper term for this method of cooking. The water, it is true, may and should boil before the meat is put into it, and for a minute or two after; but then sufficient cold water must be put in to reduce the temperature to about 150°, and at this point it must be kept until the cooking is effected, that is, until it exhibits no appearance of redness anywhere. "By the sudden immersion of the flesh in boiling water," says our authority, "the external constituents, and especially the albumen, becomes quickly hardened and coagulated, so as to form a case around the interior portions. If the high temperature is preserved, this hardening process will be carried right through the joint, which is thus rendered indiges-

tible, whereas in the lower temperature the meat is cooked without the destruction of its nutritive soluble principles. If soup is the object of the boiling, then the meat should be put into cold water, and the temperature gradually raised to the boiling point, or near it; in this way the dissolving process goes on regularly through the whole mass, there being no case-hardening to interfere with it." N.B.—All vegetables should be thoroughly boiled; they will be likely to disagree if they are not.

BOILS. These painful inflammatory swellings mostly occur in young and vigorous persons, so much so indeed as to be generally looked upon as a sign of robust health. Now and then, however, we find them breaking out upon the weak and delicate; in any case they are symptomatic of some derangement of the system, which takes this means of relieving itself of that which is superfluous, or dangerous to its internal economy. They should be regarded as warnings that some change in the diet or mode of life is necessary to the preservation of complete health; those who neglect such warnings often suffer the consequence in an attack of severe illness, or in an eruption of a more painful and dangerous kind. See *Carbuncle*.

The seat of the boil is the true skin and the subjacent cellular membrane. A small angry-looking spot on the outer skin first appears; this gradually enlarges into a swelling with a whitish conical centre, surrounded by a hard inflamed base; sooner or later this is sure to suppurate and discharge pus and blood, and a fibrous mass called a core; until this latter is ejected the abscess will not heal; it often lies deep, and causes great pain before coming away. Warm-water bathing, and poulticing with Linseed meal, is the proper treatment at first; Resin Ointment, or Venice Turpentine, or some other drawing application of an irritating nature, is often applied, but it causes unnecessary pain, and effects no object that the poultice would not. As soon as the prominent part of the swelling becomes soft, a cut should be made with a knife or lancet through the skin beneath which the core lies; this permits the escape of the confined matter, and relieves the pain. The poultices should be continued until the core is drawn out, soon after which the healing process will commence; this may be facilitated by a dressing of simple ointment, or pure hog's lard will do.

Boils and Carbuncles have recently been successfully treated with Opium, of the aqueous extract of which a thick solution has been painted on any suspicious spot;

this forms a coating which must be renewed three or four times a day: twenty-four hours' application is said to be generally sufficient to arrest the spread of the inflammation. A plaister composed of equal parts of Soap, Opium, and Mercury, spread on thick leather, is then placed on the spot, having a hole in the centre for the escape of any matter; if painful, a poultice must be applied. If, in spite of this treatment, the boil will have its course, strong Nitric Acid is said to be the best application, using it freely two or three times, taking care to remove the slough before each application, supporting the margin with plaister and poulticing freely. The beneficial effects of the opium is said to depend upon the soothing influence which it exerts upon the capillaries, small arteries, and nerves; its immediate effect is to lessen the throbbing, heat, and redness. The use of the plaister is to give support to the inflamed vessels, and to protect the surface from the atmosphere.

Boils often follow each other in rapid succession; they are very painful and troublesome, but not in themselves dangerous; they seldom run into ulcerations and deep seated sloughing sores unless neglected; persons who are obliged to go about their daily avocations with them will do well to apply, during the day, a piece of lint saturated with Olive Oil, and kept on with strapping. For internal treatment, those of a full habit should take 3 or 4 grains of Blue Pill two or three times a week, with a Senna Draught each morning after; they should also be abstemious in their diet, and avoid stimulants. Delicate persons should take a Compound Rhubarb Pill every alternate night, or a draught composed of Rhubarb and Magnesia, 10 grains of each in Cinnamon Water; these should have generous diet. Decoction of Sarsaparilla, $\frac{1}{2}$ a tumbler full twice a day, and tepid baths may be of service to such. See *Furunculus*.

BOLETUS. A genus of the Mushroom tribe of plants belonging to the order *Fungi*, (which see). Two of its species are *B. Ignarius*, a parasitical fungus found most commonly on the oak; it is applied to wounds as a *Styptic*; *B. Pseudo Ignarius*, from which is obtained *Boletic Acid*.

BOLOGNA STONE. A phosphoric stone found at Bologna; it is the native sulphate of *Baryta* (which see).

BOLUS. This is a large soft kind of pill which modern medical practice has pretty generally agreed to discard from its list of formula, although the old physicians were fond of ordering it; it might be composed

of any of the ingredients used for pills, but is a disagreeable and inconvenient mode of administration.

BOMBOS (Greek, for the humming of the Bee). A dull intermitting sound in the ears, like beating or buzzing. See *Ear*.

BONE. This is the substance of which the frame-work of the animal body is composed, to which are attached the softer portions which it alike protects and supports; it is hard and firm, and, therefore, well adapted for these purposes, and also for affording leverage for the action of the muscles. Bone is a highly organized and complex substance, it consists of animal and earthy, and saline materials, in the proportion of about one-third of the former to two-thirds of the latter, or to speak more strictly, according to chemical analysis, we may say that in 100.00 parts there are 33.30 of cartilage and blood vessels, 51.04 phosphate of lime, 11.30 carbonate of lime, 2.00 fluuate of lime, 2.36 magnesia and soda.

In the human frame there are 252 bones, they are of various forms and degrees of density or hardness; thus in the limbs, they are hollow cylinders, combining lightness with strength; in the body and head they are chiefly flattened and arched, forming cases for the internal viscera; in the spine and extremities, they are in many pieces, to facilitate the bending of the numerous joints; their connections with each other are accomplished and preserved in many ways. See *Joints*, *Muscles*, *Sutures*. In all bones, whether hollow or solid, the outer portion is harder than the inner; many of them are spongy, or as it is scientifically termed, *cancellated*, most of them have minute irregular cells scattered through their texture; they are covered by a thin fibrous membrane called the *periosteum*, or, on the head, *pericranium*; inside the skull, this covering is termed *dura mater* (which see). At those extremities, where a smooth and elastic substance is required for the joints, most bones have a covering of *cartilage*, (which see). Bones are first developed in a gelatinous form, which hardens into cartilage, and then receives the deposit of lime, by which they are rendered firm; sometimes there is a deficiency of the earthy deposit, and thus the bones are bent and yielding (see *Rickets*). When there is too much lime the bones are too brittle and easily broken. For further particulars respecting bones, see *Osteology*, *Teeth*, *Skeleton*. One of the principal diseases to which the bones are subject, is *Caries* (which see); it acts on the periosteum like ulceration on the soft parts of the body.

Another disease of the bones is *Necrosis* (which see) it is, as its name implies, actual death of the osseous substance. Both these diseases are characterised by a constant gnawing pain in the bone, swelling and redness over the seat of the disease ensues; there is a formation of matter and a discharge of a foul foetid character communicating a dark stain to the dressings. Several openings in the skin may occur along the course of the diseased bone, of which occasionally small pieces may come away with the discharge. No time should be lost in seeking medical advice when there is reason to suspect the existence of either of these diseases, as irremediable mischief may result from a neglect of them; although not immediately dangerous, they are likely to prove eventually fatal, wearing the patient out by constant irritation, and the strain upon the system, by which the constitution is irretrievably ruined, and the chances are that the patient goes limping through life a miserable cripple.

A frequent and desirable termination of ulceration, or caries of the bone is *Anchyllosis* (which see). Many minute blood vessels pass into and through the porous tissues of the bones, and hence they are liable to *inflammation* and *congestion*, both acute and chronic, resulting in softening, and ulceration or mortification, passing thus into *caries* and *necrosis*. That which is commonly called a *White Swelling* (see *Knee*) is a result of chronic inflammation, it ends in caries of the spongy texture of the ends of the bone, and destruction of their cartilaginous lining; *Abscess of bone*, sometimes results from inflammation, and especially after acute disease, such as *Small Pox* (which see), a prominent symptom is a fixed pain in one spot in addition to inflammatory enlargement.

Exfoliation is the death of the outer bony layer only; it is generally caused by some injury to the bone from a blow or a graze, or the amputating knife; in this case the shell dies, and is replaced by fresh osseous matter coming up from beneath by granulations pushing the dead bone from its place in thin flakes or exfoliations. (See *Fractures*, *Scrofula*).

The fact that, the gelatinous portion of bone is capable of extraction by boiling, has been turned to an economical account, in the making of soups and other nourishing compounds, and also in various branches of the fine arts. (See *Gelatine*.) Those who have the care of providing for families should bear this fact in mind, and allow no liquor to be thrown away in which

bones have been boiled, nor any bones of roast joints as they contain nutrition. A cheap, and economical apparatus, called *Papin's Digester*, has recently been introduced, which greatly facilitates the extraction of the animal matter from bones, this it does so completely that, on being taken out they fall to pieces, having little beyond the earthy constituents left; the amount of nourishment thus extracted is very considerable, and if not used in the house, may well be made the foundation of soup for distribution amongst the poor of the neighbourhood. Bones are also useful to grind as manure, for which their earthy and animal constituents well adapt them; so nothing need be wasted nor lost, the bone which has served its purposes in the human, or some other animal frame, contributes to the production of fresh bone, and decay goes hand in hand with renovation.

BORAGE. The *Borago Officinalis* of botanists; a plant of the natural order *Boraginæ*, found in this country, chiefly in chalky places; originally a native of Aleppo, but now naturalised in most coun-



tries of Europe. It possesses demulcent properties, and was formerly much used for making cooling drinks, having in its tissues a small quantity of Nitrate of Potash.

BORAX. This substance is the Biborate of Soda (*sodæ biboras*). It is diuretic, antilithic, and emmenagogue, but is now seldom given internally; when it is so, the dose is from 5 to 30 grains. It was formerly prescribed as a sedative under the name of Boracic Acid. It is chiefly used now locally as a detergent, and more especially in aphthous affections. It has been recommended, dissolved in Elder flower or

Rose water, as a wash for the face, to remove freckles and tan; the proportion being about 1 drachm to 6 ounces; also, as a lotion for gangrenous buboes; is said to be good for ringworm, dissolved in Acetic Acid; and in the later stages of ophthalmia in Laurel Water and Mucilage; and mixed with Elder Ointment, for broken chilblains. The *Mel boracis* (Honey of Borax) of the Pharmacopœias is made by mixing 1 drachm of borax with 1 ounce of honey; this is the usual form of application in *Thrush* (which see).

BOTHRIOCEPHALUS LATUS (Greek, *bothrion*, a pit, and *kephale*, the head). The broad tapeworm, called *Tœnia lata*, found in the intestines. See *Vermes*.

BOUGIE. A surgical instrument, used for dilating the œsophagus, rectum, urethra, &c.; it may be of wax, or some pliable composition, or soft metal. The elastic gum bougies are those most used at the present time; their thickness varies from the sixteenth of an inch, or less, to an inch or more in diameter—the larger ones being for the rectum. Bougies are frequently used by non-professional persons for opening, or keeping open, constricted passages, especially that of the *Urethra* (which see); but their employment thus is always attended with a considerable degree of danger; they have been known to break in the passage, and require an operation for their removal, or to pass into the bladder, and leave a portion there, setting up active inflammation, and greatly endangering life; if passed at all by inexperienced hands, it should be done with the utmost caution; no force should be used, and the instrument must be withdrawn if it causes violent pain; care should be taken to grease it well before passing, and the operator should begin with a small size, gradually increasing as he finds the passage easy. See *Stricture*.

BOURDONNEMENT. A name given by French surgeons to several varieties of imaginary sounds denoted by these terms: 1, *Syrigmus*, a ringing in the ears; 2, *Susurrus*, or whizzing sounds; 3, *Bombus*, beating, or buzzing sounds.

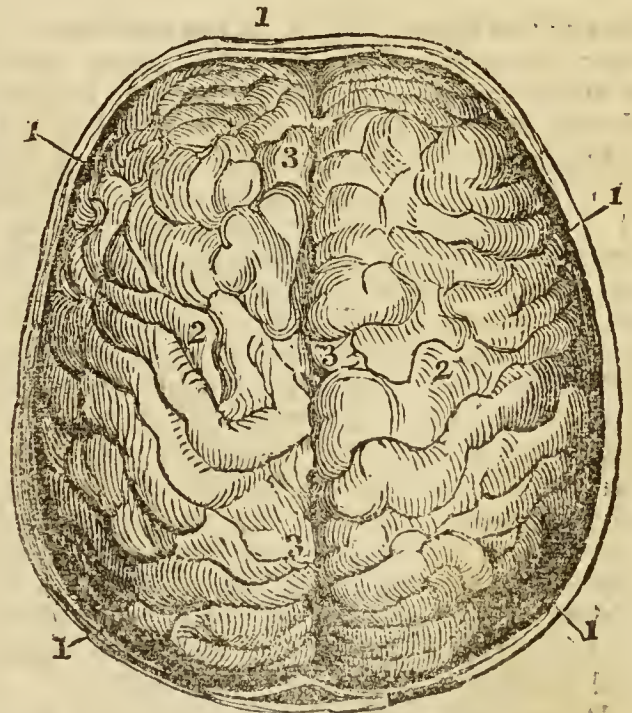
BOVINA FAMES (Latin *bos*, an ox, and *fames*, hunger). Voracious appetite, sometimes called *Bulimia*.

BRACHIUM (Greek, *brachion*, the arm). Hence the term *brachial* is applied to a muscle, artery, and the lymphatics of the arm, and to the *axillary plexus*.

BRADY SPERMATISMUS (Greek *bradus* slow, *sperma* semen). Seminal mis-emission, in which the discharge is retarded by organic weakness. See *Semen*.

BRAIN. This is a collective term signify-

ing those parts of the nervous system, exclusive of the nerves themselves, which are contained within the *Cranium* (which see). The human brain, the average weight of which is three pounds in the male, and four or five ounces less in the female, is divided into three distinct parts, called the *Cerebrum*, *Cerebellum*, and *Medulla Oblongata*; these several parts are invested and protected by membranes, and the whole together constitute the *Encephalus*, Greek for within the head. Of the membraneous coverings which enclose that soft pulpy organic mass, two have been called *mater* (mother), from the old notion that they gave rise to all the other membranes of the body, these are the *Pia Mater* and *Dura Mater*; the former is a very delicate tissue, covered in every part with minute blood vessels, which are, in fact, the nutrient arteries of the brain, before entering which they divide and subdivide upon the external surface to an extreme degree of minuteness so as to prevent the blood entering upon the tender cerebral substance in too forcible a manner. The *Dura Mater* is a much stronger and coarser membrane, which lines the inner portion of the skull, and forms an external covering for the brain and its appendages. It gives off several elongations, which are called *processes*, and which descend between certain portions of the brain; that termed the *superior longitudinal process* is the most remarkable on account of its size, it extends from the fore to the back



part of the skull between the latter halves of the cerebellum, and on account of its shape, has been called *falx cerebri*, the first term meaning scythe-like. In the above cut,

it; local and general bleeding, quiet both of mind and body, with cooling aperient medicines, abstinence from all rich and stimulating foods and drinks, is the proper treatment; in those of spare weakly habit, it is sometimes owing to want of vital energy, and in this case, the diet should be rich and stimulating; and the aperients, if required at all, must be of a cordial nature; but all this should be left to the medical practitioner; the disease too nearly affects the issues of life and death, to be tampered with.

Concussion of the Brain is nearly always produced by a blow or a fall; it is one of the most frequent injuries to which this part is exposed; it may be either slight, or severe, in proportion to the intensity of the exciting cause; in the former case, the effect is but momentary, the patient is stunned, but very soon recovers consciousness, and perhaps feels no more of it, except a little tenderness of the part struck. In the latter case, he remains unconscious, without the power to move or speak, the pulse is slow and feeble, the breathing difficult, frequently there is vomiting, and an unnatural contraction or dilation of the pupils of the eye; in this case but little can be done beyond putting the patient to bed, and keeping the surface of the skin warm by frictions and hot applications; when there is extreme depression, a little Brandy or Sal Volatile may be given, but very sparingly, because, if death does not ensue, there will be reaction, with an inflamed state of the organ. If it is simple concussion, a fatal termination is not likely; but sometimes the shock causes rupture of the substance of the brain itself, or its enclosing membranes, or of one or more of its blood vessels, causing *Effusion* (which see), in this case the patient may never rally from his state of stupor, or if he does, it will be but for a short time; there will probably be convulsions, paralysis, and apoplectic termination of his sufferings. All these are characteristic of *Inflammation* (which see). In so acutely sensible an organ as the brain it must be evident that an inflamed state of the tissue is by all possible means to be avoided, hence when reaction sets in after the stunning and depressing effects of concussion have passed off, the most active measures should at once be taken.

If a medical man is not within call, and the alarming symptoms increase in intensity, there may be sufficient warranty for an unprofessional person to bleed: eight, ten, or twelve ounces of blood may be taken from the arm, or a dozen leeches may be applied about the head, or the patient may be cupped

in the nape of the neck; the latter is perhaps the best mode of depletion, as it is effected quickly, and very near to the seat of disease. The hair of the head should also be cut or shaved off, and rags wet with cold water applied; if iced, so much the better.

Among the symptoms of inflammation of the brain, or its investing tissues, may be mentioned as prominent, shivering succeeded by heat in the skin, great thirst, tongue furred, pain in the head, intolerance of light, bloodshot eyes with a wild wandering look, sickness, and delirium; there may be violent and obstinate vomiting, as a first symptom, followed, after a time, by the others or some of them. It should be borne in mind that concussion of the brain is not always the result of a blow; it may be produced by a violent shock to the nervous system, such as that caused by coming down heavily on the feet from a leap. In cases of *Fracture of the Skull* (which see) the same symptoms as those described are likely to occur, as in these there is generally both concussion, and its common result, inflammation. In children, especially those of a scrofulous habit, inflammatory action very commonly leads to a form of disease popularly called *Water on the Brain*, or *Hydrocephalus*, (which see); most commonly, however, this is a chronic disease dating from birth, or soon after.

The state and condition of the Brain, even when not subjected to the action of any particular disease, varies considerably in accordance with the advance of years; very frequently in old age there is a deficiency of blood in the vessels of the Brain, and this occasions very distressing symptoms, such as headache, giddiness, slowness of intellect, and paralysis. Very much the same results follow a *Softening of the Brain*, only in an aggravated degree; in this case imbecility and paralysis are almost sure to come, and there is little or no hopes of any alleviation of them. In old age too, it should be observed that the arteries of the brain become less elastic than at an earlier period of life, more brittle and liable to rupture; hence indulgence in any excesses, or violent exertion, should be especially avoided by the aged. For other affections of the Brain, see *Apoplexy*, *Delirium Tremens*, *Paralysis*, &c.

BRAN. This is the husk or skin of the grains of Wheat, which is broken up in the grinding, and retained in the sieve through which the flour passes. A portion of it mixed with the finer meal stimulates and assists the process of digestion, see *Bread*.

To alleviate pain, and assist the operation of the remedial measures in many forms of

disease, Bran is one of the most useful of articles. It is cheap, and at all times easily procured; it is soft and yielding in its nature, and readily adapts itself to any part whereto it may be desirable to apply it, moreover, it retains heat for a very long time; hence *Bran Poultices*, and dry applications are constantly made use of in the treatment of the sick. These poultices are especially efficacious in severe local pain, whether spasmodic or inflammatory; they consist of a quantity of bran, first heated in an oven, or better still in a frying-pan, and moistened by being sprinkled freely with hot water, and quickly transferred to a flannel bag, which should be made considerably larger than the seat of the pain which it is designed to alleviate. Over this when it is applied, should be laid a piece of oiled silk, or other waterproof material, which will retain the heat, and keep the moisture from the bed, or other clothes. Sometimes the bag is first filled with dry bran, and then plunged into boiling water; but in this way, as its absorbent powers are great, and it cannot be well wrung, or pressed out, without lowering the temperature, it is too wet, and frequently too heavy, for the required purpose. Very frequently, in acute inflammation of the chest or abdomen, its effects are to be preferred to those of either blister or mustard poultice; it is at once a counter-irritant and local vapour bath, causing free perspiration of the skin. In the inflammatory affections to which children are liable the efficacy of the bran bag is constantly tested; in the premonitory symptoms of croup, immediate resort should be had to it; when desired to act more strongly as a rubefacient it may be lightly sprinkled with Spirits of Turpentine. The effects of the moisture are sometimes produced by placing two or three folds of flannel wrung out of boiling water, and placed on the parts with a bag of hot dry bran over them; the latter application alone is scarcely to be recommended; it sometimes produces perspiration, but oftener perhaps, only dry feverish heat, and it never has the soothing effect of the moist application.

BREAD. The loaf made of wheaten flour is what we understand by the term bread in this country, where rye, barley, maize, or any other grain is seldom or ever employed for the purpose of making the great pabulum of life. Chemical analysis shows that wheaten flour is composed of three ingredients, viz. gluten, in which the nutriment consists, starch, and mucilage. If simply made into a cake with water, and baked, it would no doubt be as nourishing as the leavened loaf; but then it would be far more

difficult of digestion, which is greatly facilitated by the porous form given to it in the process of fermentation; this renders the mastication and consequent mixture with the saliva more easy, and thus the food conveyed into the stomach is in a better state for assimilation and absorption. Most persons are aware that the fermentation is effected by means of brewer's yeast mixed with the dough; but few, perhaps, know the precise way in which this acts to produce that porous state of the mass and render the bread, when baked, light and digestible. It is on the sugar, formed of the gluten and starch in combination, that the yeast acts, causing it to ferment: thus carbonic acid gas is formed, and this, on the application of heat, in baking, expands and, much of it being unable to escape from the tenacious dough, makes little cells and cavities or pores; this constitutes what is called the rising of the bread; which is light or heavy just in proportion to the perfect or imperfect performance of this process. It has been thought, by some chemists, that the dough loses somewhat of its nutritive properties by this decomposition of the gluten, but Liebig thinks that this view has little foundation.

Several kinds of what is called *Digestive* or *Unfermented Bread* are now made; sometimes Carbonate of Ammonia being used for the evolution of the Carbonic Acid gas; sometimes Carbonate of Soda with the addition of an acid—Tartaric Acid, Buttermilk, or White Vinegar. The following may be recommended as a good and easy method of making a batch of wholesome *Home Baked Bread*: To 2 pecks of good "Seconds" flour placed in a pan or trough, add $\frac{1}{2}$ a-pint of fresh yeast, poured into a hole made in the middle and previously mixed with $\frac{1}{2}$ a-pint of warm water; stir up the yeast and flour together in the central hole until it assumes the consistency of a thin paste or batter, over which scatter some dry flour and on it lay a cloth; put the whole by to rise, if in the winter, near the fire. The "sponge," as it is called, is sufficiently risen when it cracks the coating of flour on the top. The whole must then be well-mixed and kneaded, a $\frac{1}{4}$ of a-pound of salt being added, and as much lukewarm water as may be required to make it into a stiff dough; let it remain in the trough for 20 minutes, or so, then divide it into loaves and bake. The following is also a good method: Take $\frac{1}{2}$ a-pound of Carbonate of Soda and mix it first with about double the quantity of flour; then add it to 48 pounds more flour, and mix it thoroughly, then take $\frac{1}{2}$ a-pound of Muriatic Acid, put it into a gallon

of water, or as much as may be required, to make the whole into a thinnish dough, which should be baked immediately. All bread should be two days old before it is eaten, to be perfectly wholesome; and that which is made of the finest flour is the least so; although few persons are aware of this, if we may judge by the general desire to have bread perfectly white and free from specks, which are caused by the husks of the grain, or bran, in which lies much of the nutriment. *Brown Bread* is certainly more wholesome than white, this is made of flour that has not been so closely sifted, and, consequently, contains much of the bran; it is slightly laxative, and thus corrects the general tendency of flour to confine the bowels. On some weak stomachs, however, its action is too irritating. To exhibit the difference, in point of nutrition, between fine and coarse flour, the French chemist Magendie, is said to have shut up two dogs and fed one upon bread made of the former, and the other upon that composed of the latter; the first died at the end of forty days, when the last was as strong and healthy as ever.

Under the head of *Adulterations*, we have already spoken of the substances which so often enter into the composition of bread; some of them are, perhaps, not injurious to the health of the consumer, and those which are, such as Plaster of Paris, Chalk, &c., are very rarely used. Quite recently, when the Lancet Sanatory Commissioners examined samples of bread purchased of many of the bakers of the metropolis, they found alum to be almost the only foreign ingredient, and this was chiefly detected in the lighter and finer kinds. That there is generally alum in the best bakers' bread, should render persons cautious of giving it to those subject to acidity of stomach, and especially to infants with whom it is always a cause of griping and flatulency. For such, the unfermented bread above spoken of is much the best, and it should be baked a second time, slices of it being cut from the loaf, and allowed to remain in the oven until it becomes crisp and hard. When required for use it must be soaked in hot water, mixed with a little milk, and slightly sweetened. Rusks, Tops-and-bottoms, and Biscuits, which are all so many kinds of bread, well-baked, also make good *Food for Infants* (which see).

Where plenty of animal food can be obtained, children past the period of infancy may be fed upon bread made partly of rice and potatoes, or flour of maize; but where it cannot, wheaten flour only should be used, as that alone is capable of supplying the

materials for the formation of *bones* and *muscles* (which see), also *Gluten*, *Nutrition*.

BREAD AND MILK. No child under sixteen or twenty months old should be fed upon this; it should never be given to one at the breast, nor for some time after weaning; for elder children, generally, it is a good nourishing breakfast diet, but it is too heavy for some stomachs; if it produces head ache, and a feeling of oppression at the chest, and of fulness in the abdomen, it should be discontinued. The following is the best method of making it:—Take stale bread of good quality, and cut it up into small pieces, then pour on it boiling water and let it stand for ten minutes, then press on the top of it a saucer, holding it over, and turn up the basin so that the water may drain away; have a sufficient quantity of new milk boiling in a saucepan, add this to the bread, mix, and pour the whole into the saucepan together, boil it up, sweeten, and it is fit for use. If the milk is very rich it should be diluted with water.

BREAD POULTICE. In all cases where it is desirable to keep moisture or warmth to a part this is a good application; it may be cold or warm as the occasion requires. It should be prepared thus:—Into a basin, previously scalded out, put a slice of bread with the crust taken off, stand a plate over it, and when the bread has become thoroughly saturated with the water, drain off the rest, and the poultice is fit for use; spread it out on some folded linen and apply it to the part affected. See *Poultices*.

BREAD PUDDING. This is a very nutritious and agreeable diet; if for a child it should be prepared thus:—Grate, or crumble, some stale bread into a cup, pour over it a sufficient quantity of boiling milk, let it stand until cool, then add the yolk of an egg, previously beaten up, boil it in the cup for a quarter of an hour.

BREAST. We use this term here in its restricted sense, as applied to the fleshy protuberance common to women, in which is situated the mammary glands, for the secretion of the milk by which the infant is nourished. Its full development depends greatly upon habit and constitution, being, in some, much more early in advancing womanhood, of which it is one of the most remarkable signs, and prominent in full maturity, than in others. In the earlier stages of pregnancy, its fullest development commences; the breast swells, and the nipple enlarges, and by, or near, the time of delivery it is filled with lacteal fluid, which passes readily, on suction, into the mouth of the child. (See *Milk*.) Too frequently

the proper enlargement of the breast, and increase of the nipple, is retarded by the requirements of fashion, which prescribes a certain unnatural slimness of waist to her votaries. (See *Stays, Tight Lacing*.) The consequences, sometimes, are hardened and congested states of the tissues, an insufficient supply of milk, or a failure of it altogether; or a nipple so flattened and pressed into the breast, that it cannot be taken hold of by the mouth of the infant. Abscess, Cancer, and other evil consequences may also ensue from undue pressure upon such tender parts. We would, therefore, warn our female readers against the pernicious custom here alluded to; not only do the breasts suffer from it, but the lungs also, and other organs whose healthy condition is essential to the functions of vitality.

In speaking, then, of the *Diseases of the Breast*, we shall confine ourselves to those which affect the female breast only, and not include those of the whole *thoracic* region, or the *chest* (which see). One of the most common of these diseases is *Inflammation*, resulting in *Abscess*; various causes may produce it, such as a blow, exposure to cold or wet, great mental excitement, unnatural distension by an accumulation of milk, or too much pressure



in the manner above hinted at. It may occur at any period between early and advanced womanhood, but most commonly

it does occur within a week or two of child-birth, and is the result of some obstruction in the flow of the milk, or change in its normal character; such a change will be sure to occur if the milk is suffered to remain long in the breast; therefore should the infant be unable to relieve it at all, or insufficiently, artificial means must be taken to do so. There are various kinds of *Breast Pumps* used; one of the most elegant and convenient is that represented in the preceding cut, which can be used by the patient herself, who has only to draw in the air from the tube, and the milk will flow in to fill the vacancy, and be received in the pendant reservoir beneath; another form is the syringe represented beneath, to which is



attached a glass reservoir, with a broad flat mouth, adapted to fix on the breast and receive the nipple; a simpler and cheaper form, is a stout elastic bag with a glass mouth-piece similar to the above, and a yet more homely contrivance is a wide-mouthed bottle sufficiently capacious to hold two quarts; this is dipped in hot water and the mouth immediately applied to the breast; the heat will have rarefied the air within, which, as it cools, contracts and leaves a vacuum, causing suction, which draws the milk into the bottle. Some nurses have the art of drawing the breast

with the mouth ; and it is well to let them do so, as no instrument can effect the object so well and thoroughly.

Where there is an inflamed state of the tissues of the breast, there are shooting pains, and often febrile symptoms ; the part will become hard and exhibit knotty protuberances, indicating the formation of an abscess ; these symptoms will be succeeded by throbbing and a sensation of weight ; the skin gradually assuming a thin and red appearance, and becoming thinner until it finally breaks, and allows the escape of the matter ; but, before this occurs, there is frequently much suffering and constitutional derangement ; a surgeon will generally prefer to avoid this by opening the abscess. When the premonitory symptoms of mammary abscess are observed, recourse should at once be had to remedial measures : let the breast be well yet gently rubbed with a soft hand, into the palm of which is poured fresh Olive or Almond Oil ; the friction should be continued for about ten minutes, and repeated every four hours or so. Goose Grease and other fatty substances are recommended, but simple oil is best, the friction being the principal agent for good. Between the intervals of this, the breast should be kept covered with a tepid water dressing ; having over it oiled silk to prevent evaporation. Care should be taken during this treatment to keep the bowels gently open, and to keep under the febrile symptoms. Leeching the breast in case of threatened abscess is sometimes resorted to, but its utility is very questionable, at all events it should never be so unless under proper direction ; there may be cases in which it is advisable. A mammary abscess will frequently continue discharging for a considerable period, and, during this time, the patient should be supported by a nourishing, although, light diet : stimulants are generally to be avoided, but sometimes they are really necessary. A warm bread poultice is best for the abscess ; it should be changed about every four hours, and covered with oiled silk : when the discharge has nearly ceased, simple tepid water dressings may be substituted. The breast, during all this time, should be supported by a soft handkerchief tied round the neck ; an application of Collodion all over the part has sometimes been used ; it forms a thin coat which, contracting as it dries, affords the necessary support, if the breast is not very large and heavy ; if some amount of pressure is required, strips of strapping crossing each other will effect this object.

After all danger of inflammation is over, a more generous diet may be allowed ; a grain of Quinine, in a little Sherry Wine, two or three times a-day, or half a-pint of Porter. Should the breast remain hard, friction with Soap Liniment should be resorted to ; a drachm of Compound Tincture of Iodine to each ounce will render it more effectual.

Very painful and distressing cases of *Sore Nipples* frequently occur after child-birth ; sometimes they cannot be avoided, but frequently they arise from too great an anxiety on the part of the mother, who is constantly meddling with them, applying the mouth of the child, and resorting to all sorts of expedients to draw them out : a judicious nurse will prevent this, and also take care to guard the breasts, as much as possible, from those constant alternations of wet and dry to which they are exposed. Nipple shields of ivory, or glass, with India rubber teats, may be readily procured, and should be used when the nipples are too sore and tender to bear the application of the infant's mouth : in this case the milk must be drawn from the breast by one of the contrivances above mentioned, and given to the child in a feeding bottle, such as will presently be described (see *Infants*). Glycerine has been found a good application for chapped or otherwise sore nipples ; it must be applied with a camel hair brush, first wiping the part dry with a soft piece of linen ; if obtained pure, there will be little or no smell in it to annoy either mother or child ; Collo-dion is also useful, but it causes considerable smarting. If, as is sometimes the case, there be suppuration, warm bread poultices must be applied, and after them tepid water dressing. Infants, a few days after birth, sometimes have the breasts distended with a thick milky looking fluid ; and youths just arriving at the age of puberty have hard and painful swellings about the nipples ; in both cases warm fomentations only are required ; the parts should not be pressed or rubbed ; for the child a little cold cream or simple ointment, after fomenting, is desirable. For other Diseases of the Breast see *Cancer*, *Milk Fever*.

BREATH is the air drawn in, and expelled from, the lungs in the act of *respiration* (which see) ; it consists of gas and watery vapour, the latter of which, in cold weather, becoming condensed, as it issues from the mouth, is perceptible to the eye. The peculiar odour of the breath, and its mode of expiration is indicative of the state of health ; so that the experienced physician consults not only the pulse and the tongue, but also

BREATHING, or the act of respiration which, in Pneumonia, Pleurisy, Bronchitis, Phthisis, Broken Ribs, Dropsy of the Chest, or Abdomen, and organic diseases of the Bowels and Liver will be *short*; in the four first diseases it will also be *rapid*, as it will in Croup, Hooping Cough, and all Fevers; it will be *laboured* and *painful* in acute Inflammation of the substance of the Lungs, of the Pleura, or a Broken Rib, or of Pleurodynia, all of which see. In most affections of the head and nervous system, it is slow, usually gentle, and sometimes irregular; when laboured it is called *stertorous*. Much can be gathered of the state of the internal organs, from the positions a person assumes who labours under a difficulty of breathing.

Fetid Breath may proceed from decayed teeth, or morbid secretions about the tonsils, or disease of the lungs; in children it generally indicates a disordered state of the stomach, which may be corrected by means of purgative medicines; where it cannot be so remedied, it will be well for the patient to chew a little Cinnamon occasionally, or take some of the Aromatic pills prepared for the purpose; if the cause is local, the mouth should be washed with a weak solution of Chloride of Lime, or Soda.

BREGMA (Greek, *brecho*, to moisten). This term is applied to the two spaces left in the head of an infant, where the frontal and occipital bones are respectively joined to the parietal. In infancy, this space is commonly marked by a depression, which fills up as the bones unite. The two openings are distinguished as *anterior* and *posterior*. See *Cranium*.

BRICKLAYERS' ITCH. A kind of local tetter or impetigo, to which the hands of bricklayers are subject; it is produced by the frequent contact with lime. See *Bakers' Itch*.

BRIGHT'S DISEASE. This is a particular disease of the kidneys; the distinguishing mark of which is the presence of the serum of the blood in the urine, which coagulates on the application of heat; there may be only sufficient to cloud the fluid, or enough to form nearly a solid mass. The causes of this disease, which was first described by Dr. Bright (hence its name), are various; it may be severe cold, repressed perspiration, or immoderate use of ardent spirits; and it not uncommonly follows Scarlet Fever. It is usually accompanied by febrile symptoms, and dropsical swellings of the face and extremities, and eventually of the body also. The best treatment is cupping in the loins, hot baths, and purging with Calomel and Jalap. A mixture as under should also be given: Sweet Spirits of Nitre, 2 drachms;

Liquor of Acetate of Ammonia, 1 ounce; Camphor Mixture, 7 ounces: take two table-spoonsful three times a day. Low diet, and an avoidance of Alcoholic Stimulants. See *Kidney, Urine*.

BRIMSTONE. A native mineral substance familiar to most persons; a description of its properties and compounds will be found under the head of *Sulphur*.

BRITISH OIL. A stimulant embrocation, compounded as follows:—Camphor, 1 ounce; Rectified Spirits of Wine, 4 ounces; Sweet Oil, 12 ounces; Oil of Hartshorn, 5 ounces; dissolve the first in the second, then add the third and fourth. The *Oleum Petreæ Vulgari*, or Oil of Tar, is sometimes called British Oil. See *Embrocations, Liniments*.

BROCOLI. This is a variety of the Cabbage tribe, too familiar to need a description. The portion which is eaten is the undeveloped flower buds: it is a nutritious vegetable, light, and easy of digestion, if not "smothered in butter," as it too generally is. See *Cabbage*.

BRODIUM. A term in pharmacy synonymous with *jasculum*, or *Broth* (which see).

BROILING. This is a method of cooking a good deal practised among the lower classes; the meat so cooked is nutritious, but not fit for weak stomachs; the inner portion, it is true, retains its juices, but the outer is hardened and rendered difficult of digestion.

BROKEN BONES. See *Fractures*.

BROMA (Greek *brosko*, to cut). Anything that is masticated; hence *Bromatology*, a discourse on, or, a description of food.

BROMINE (*bromos*, a stench). This is, in substance, very similar to Iodine in its properties and uses. It is an elementary fluid found in sea-water, salt-springs; in some mineral waters, marine plants, and animals. The form in which it is employed medicinally is—

BROMIDE OF POTASSIUM—that is, Bromine dissolved in *Liquor Potassæ*; it is given chiefly in enlargement of the spleen, hypertrophy of the heart, chronic anthritis, goitre, and scrofulous swellings. It is more powerfully irritant than even Iodine, and must be given with great caution; the dose is from 3 to 10 grains. There is also *Bromide of Iron*, of *Calcium*, and of *Mercury*, and *Deuto-bromide*—all powerful medicines, with which no unqualified person should meddle. In case of accidental poisoning by Bromine, vomiting should be excited as soon as possible. See *Poisons*.

BROMURET. Is a combination of *Bromic Acid* with *Iodine*, *Phosphorus*, or *Sulphur*, all of which see.

BRONCHI. Greek *Bronkos*, the wind-pipe, from whence comes also *Bronchia*, the ramifications of the trachea; *Bronchial*, the name of the glands situated around the bronchi; *Bronchitis*, inflammation of the bronchea; *Bronchocele*, an enlargement of the thyroid gland—in Switzerland this is called *goitre*, which see; also *Derbyshire Neck*; *Bronchophone*, the resonance of the voice over the bronchia; *Bronchotomy*, an incision made into the *larynx* or *trachea*, both of which see.

BRONCHITIS. Is one of the above-named forms of disease which claims a prominent notice at our hands, because it is, in this country, most prevalent and fatal. It may be succinctly described as inflammation of the lining membrane of the passages of the throat, through which the work of respiration is carried on. It will be evident that an inflamed state of these passages must, besides the local irritation caused thereby, seriously interfere with the vital functions.

Bronchitis is either *acute*, *sub-acute*, or *chronic*; the former stage may commence immediately after exposure to cold; most usually the lining membrane of the eyelids, nostrils, and throat are first affected, and then the inflammation extends downwards into the chest. The earlier symptoms are running at the nose, watering of the eyes, frequent sneezing, and all the distressing symptoms of what is generally known as *Influenza*, which see. The fever generally runs high, there is extreme lassitude, with headache, and probably a troublesome cough, with expectoration of mucus; with adults this, the most active stage of the disease, frequently assumes a very dangerous character, and prompt measures are required to arrest its progress. If the febrile symptoms continue to increase in intensity, and the breathing becomes difficult from the clogging of the tubes with mucus, there is great reason for apprehension. The patient should, as a matter of course, be confined to bed; warm diluent drinks, such as Linseed Tea, or Barley Water, with a slice or two of Lemon in it; gentle aperients, if required; foot-baths and hot bran poultices to the chest; should the patient be of a full habit, it will be desirable to abstract six or eight ounces of blood, by cupping between the shoulders, or apply ten or twelve leeches to the chest. The chief dependence, however, is to be placed upon nauseating medicines—4 grains of Ipecacuanha Powder, in a little warm water every quarter of an hour, until vomiting is produced, and this should be kept up at intervals of two or three hours; Calomel, also, in 4-grain doses, should be

administered about once in every eight hours, if a manifest improvement does not take place. Sometimes a state of coma or collapse follows this treatment, and then it is necessary to give stimulants—Carbonate of Ammonia in 5 grain doses, or Sal Volatile, $\frac{1}{2}$ a teaspoonful about every hour: these are preferable to alcoholic stimulants; but, should they not succeed, Brandy may be tried, with strong Beef-tea. Should the urgency of the symptoms yield to the emetics, a milder treatment may be followed out. The following is a good mixture:—Ipecacuanha wine, 1 drachm; Aromatic Spirit of Ammonia, 2 drachms; Carbonate of Potash, 1 drachm; water, 8 ounces—two table-spoonfuls to be given every four hours; if the cough is troublesome, add a grain of Acetate of Morphine. The diet should be light and nourishing, and all exposure to cold must be carefully avoided. In children, acute Bronchitis does not commonly produce such marked effects as in adults, although sometimes it is extremely rapid and fatal, allowing little time for the action of remedies, which should be much the same as those above recommended, with proper regard, of course, to difference of age. If leeches are applied, a couple will generally be sufficient: if the child is unweaned, it must be allowed to suck very sparingly, if at all; the best plan is to give it milk from a spoon, or feeding-bottle, as the quantity can be thus better regulated. Great attention must be paid to the bowels, and also to the temperature of the air breathed by the little sufferer. A blister on the chest, about as big as a half-crown, may be sometimes applied with advantage, if the leeches and hot bran do not give the desired relief.

Winter Cough, Catarrh, Asthma, and other affections of the chest and bronchial passages are very commonly but forms of sub-acute or chronic Bronchitis, the exciting causes of which are nearly always exposure to cold and moist air, against which, in this variable climate, people cannot too sedulously guard. We shall have to speak more on this head when we come to treat of *Consumption*, (which see). At present, let us observe that, for the troublesome cough which almost invariably attends confirmed Bronchitis, and especially in the aged, Opium is the most effectual remedy. The best form of administration is perhaps the old Purgative Elixir, or, as we now call it, Compound Tincture of Camphor, taken with Ipecacuanha or Antimonial Wine—say half a drachm of the former, with 10 grains of either of the latter, in a little sugar and water, or Linseed-tea; if there are febrile

symptoms, add 15 minims of Sweet Spirits of Nitre to each dose.

It is especially during the spring months, and when there is a prevalence of east wind, that Bronchitis attacks young and old, often hurrying the former to a premature grave, and making the downward course of the latter more quick and painful: with aged people, in such cases, there is commonly a great accumulation of mucus in the bronchial tubes, which causes continued and violent coughing in the efforts to expel it, which efforts are often unsuccessful; thus the respiration is impeded, the blood, for want of proper oxygenisation, becomes unfit for the purposes of vitality, and death, often unexpectedly sudden, is the consequence. Such bronchitic patients must be carefully treated—no lowering measures will do for them, but warm and generous diet; Opium cannot safely be ventured on. Warm flannel next the skin, a genial atmosphere, inhalation of steam—if medicated with Horehound, or some demulcent plants, so much the better—a couple of compound Squill Pills at night, and during the day a mixture, composed of Camphor Mixture, 6 ounces, with Tincture of Squills, Wine of Ipecacuanha, and Aromatic Spirits of Ammonia, of each 2 drachms, with perhaps 2 drachms of Tincture of Hops—take a tablespoonful every three or four hours. Such is the most rational mode of treatment; and this, and others to which we have alluded, are some of the forms in which bronchial disease manifests itself. In all these forms, the condition of the digestive organs requires great attention; the cough, especially, when it assumes a spasmodic character, depending frequently upon the state of the stomach; so much so, that, when the stomach is empty, a little food taken during a violent fit of coughing has been known to stay it immediately. See *Cough, Expectorations*.

BRONCHLEMITIS (Greek, *bronkos*, the windpipe; and *lemma*, a sheath). A membrane-like coating of the bronchia, caused by inflammatory action.

BRONCHOTOMY. In cases where suffocation appears imminent from the stoppage of the passage of air into the lungs, owing to the tubes being clogged with mucus, or from some other cause, an artificial opening is sometimes made into the trachea or windpipe, and to this operation the above name has been applied; it is also sometimes called *Tracheotomy* (which see).

BROOM. This is the *Spartium Scoparium*, or *Genista* of botanists, a plant common enough in England; it has cathartic and diuretic properties, which render it useful

in some cases of dropsy, and other diseases of the kind. The tops and seeds are the parts used, but principally the former; they



are usually taken in the form of decoction, prepared thus:—Fresh Broom tops, 1 ounce; Water $1\frac{1}{2}$ pint—boil down to a pint and strain: dose, a wineglassful two or three times a-day. A stronger decoction has been recommended in cases of hydrophobia: the dose of the powder, either of tops or seeds, is from 1 scruple to 1 drachm. In liver complaints the above decoction, with that of Dandelion, is said to be efficacious.

BROTH. A light nourishing diet for invalids, made by boiling mutton, veal, or chicken, in water for some hours; when done it should be set aside to cool, when the fat will rise to the top and may be taken off. It can be warmed up when required, and seasoned or flavoured to palate; it is less rich than beef tea or soups, and perhaps equally nourishing. See *Diet, Regimen*.

BROW AGUE. A periodic headache, so called because confined to the forehead; is distinguished from rheumatism by the marked regularity of its attacks, which sometimes only affect half the head; and in this case it is termed *hemicrania*. It is no doubt a neuralgic affection, and should be so treated. See *Neuralgia*.

BRUCINE. A vegetable alkaloid analogous to Strychnine in its effects, but much less powerful; it is found in the false *Angustura* bark, also in *Nux Vomica*, from which the Strychnine is extracted; it is intensely bitter, slightly soluble in water, and, on cooling, assumes the consistency of wax: the dose is from $\frac{1}{3}$ to $\frac{1}{2}$ grain, gradually increased to $1\frac{1}{2}$ grains, or until some effect is produced; it is given in paralysis and lead colic. There is a Tincture of Brucine, the dose of which is from 6 to 24 drops.

BRYGMUS (Greek *Bruchos*, to gnash with the teeth). The grinding or gnashing of the organs of mastication which takes place in some kinds of disease.

BRYONY (*Bryonia Dioica*). The wild Bryony of our hedges, a plant formerly held in considerable repute for its medical virtues, but now seldom used; the root has powerful drastic properties, which render it somewhat dangerous, an overdose of it having proved fatal. *Bryonin* is an alkaloid extracted from this root, a yellowish white substance with a red or brownish tint; being much more powerful, of course it is even more drastic and dangerous than the root itself.



BUBINOCELE (Greek *bubo*, the groin, and *ikele*, a tumour). A species of hernia where the bowels protrude at the abdominal ring; it is commonly called *Inguinal Hernia* (which see).

BUBO (Greek *boubu*, the groin). A swelling of the lymphatic glands, particularly those of the *groin* and *axilla*, which see. It may be either *Constitutional*, as arising from pestilential diseases, such as the plague, of which it is a frequent symptom; or, *Sympathetic*, from the mere irritation of a local disorder; or, *Venereal*, from the absorption of the syphilitic virus. Scrofulous swellings of the inguinal and axillary glands may be considered as examples of buboes from constitutional causes; these, and those arising from mere irritation, the consequence of a local disorder may be looked upon and treated as simple cases of *Inflammation* (which see); Leeches, cold lead lotion, with the administration of saline purgatives, will be sufficient for them; but where the bubo proceeds from venereal taint, Mercury must be freely administered, and the system, if necessary, be lowered by bleeding. The treatment of the swelling itself, which, in this case, commonly assumes a coppery hue, must be the same as that of an *abscess* (which see). Before suppuration takes place, the swelling sometimes becomes as large as a hen's egg, and extremely painful; warm poulticing and fomentation to ripen it, and then a free incision to let out the purulent matter, will be the treatment for those who are not disposed to await the softening of the integuments, and breaking of the skin. After the discharge has ceased, a lotion of Nitrate of Silver, in the proportion of about 4 grains to $\frac{1}{2}$ a pint of distilled water, and Zinc Ointment for dressing; if there is proud flesh, a few grains of Red Precipitate should be sprinkled on the spots, or they should be touched with Caustic.

BUCCAL (Latin *bucca*, the cheek). A term applied to a branch of the internal maxillary artery, to certain branches of the facial veins, and to a branch of the inferior maxillary nerve. See *Cheek*.

BUCCINATOR (Latin *buccina*, a trumpet). A muscle of the cheek brought much into play by trumpeters. See *Cheek*.

BUCHA. (*Barosma Serratifolia*), natural order *Rutaceæ*; possesses stimulant, diuretic, and diaphoretic properties, acting specially upon the mucous membrane of the bladder; it has been recommended in dropsy, dyspepsia, chronic rheumatism, and cutaneous affections. Dose of the powdered leaves, from 20 to 30 grains; of the tincture, from 1 to 2 drachms; of the infusion, from 1 to 2 ounces. This is made by pouring a pint of boiling water on 1 ounce of leaves, and letting it stand in a covered vessel for 2 hours.

BUCK BEAN (sometimes called Marsh Trefoil: scientific name *Menyanthes Trifoliata*: belongs to the natural order *Gentianeæ*). Is tonic and astringent; in large doses, cathartic, useful in scurvy, scrofula,

may be taken, or from 1 to 2 drachms of the dried ones.



gouty affections, and fevers: dose—1 scruple to 3 of the powder; of the infusion, 1 to 3 ounces; of the extract, 10 to 15 grains.

BUCNEMIA (Greek *bou*, a sign of augmentation, and *knemia* the leg). The term signifies a swollen or tumid leg. See *Leg*, *Phlegmatia dolens*.

BUFFY COAT. The buff-coloured fibrin which appears on the surface of blood taken in certain states of disease. See *Blood*.

BULBO-CAVERNOSUS. The name of a muscle situated beneath the bulb of the *urethra* (which see), and *Muscles*.

BULLÆ (Latin for bubbles). Portions of the skin raised by watery fluid into vesicles. See *Blains*, or *Blebs*.

BUCKTHORN. A shrub indigenous to Britain (*Rhamnus Catharticus*;) natural order *Rhamnaceæ*; sometimes called the Purging Buckthorn, from the cathartic properties of its berries, which are used fresh, or made into a syrup—the *Syrupus Rhamni* of the Pharmacopœia. It is given chiefly in dropsy and worms, the dose being from half an ounce to an ounce; of the fresh berries 20

BULIMIA (Greek, *bous*, an ox, and *boulimos*, greathunger,) voracious appetite. Its synonyms are *Adephagia*, from *adin*, much, and *phago*, to eat; *Bapeina*, from *bous*, an ox, and *peine*, hunger; *Cynorexia*, from *kyon*, a dog, and *orexis*, appetite; *Phagedæna*, from *phago*, to eat as an *ulcer* (all of which see).

BUNION. This painful and annoying kind of swelling is the result of inflammation of a small bursa, situated just over the joint, at the ball of the great toe; the pressure of tight shoes is generally the exciting cause, and all such pressure should be at once removed. During the first stages, one or two leeches should be applied to the swelling, with warm fomentations and bread poultices. A permanent enlargement of the part is generally the result, and this must be studied in taking measure for the boot. An application of caustic will sometimes reduce it considerably; it should be kept covered with Burgundy Pitch, or Soap Plaister, spread upon soft leather, or a circular piece of the fungus called German Tinder.

BUPHALMUS (Greek, *bous*, an ox, and *ophthalmus*, the eye). A form of ophthalmic disease, called *Oxeye*. See *Hydrophthalmia*.

BURDOCK. This is another familiar British plant useful for its medicinal qualities, being aperient, diuretic, sudorific; it is given in rheumatism, gout, syphilis, chronic asthma, and calculous complaints. The scientific name is *Aretium Lappa*, or *Bardanus*. The decoction is made by boiling 2 ounces of the leaves in a pint of water: dose, a tea-cupful several times a-day.



BURGUNDY PITCH (Latin, *Pix Abietana*, or *Burgundica*). A resinous substance, procured from incisions in the *Pinus abies*, and some other species of the pine tribe; it should be of a pale yellow colour, brittle, and fragrant. Much of that sold in the shops is but common resin melted and strained; with perhaps a small portion of the genuine article. Its chief use in medicine is in the preparation of various plaisters, used as rubefacients and strengthening applications. That most employed is the Pitch Plaister (*Emplastrum Picis*) of the London Pharmacopœia. This substance is also called *Frankincense* and *Thus* (which see); also *Pitch* and *Plaisters*.

BURNS. There are no more frequent, distressing, and dangerous accidents than those which result in the above; they cause great pain, often amounting to agony, local injuries of a most serious character, and permanent constitutional derangement, even if death does not immediately or

quickly ensue. The first rule to be observed in the event of the clothes catching fire, is to avoid running away for assistance, as the motion will only fan the flame, and increase the evil. Presence of mind in the sufferer is rare on such an occasion, but the best plan is to lie down and roll on the floor, screaming of course for assistance. Whoever answers the call should snatch up a rug, or piece of carpet, or other woollen article, and act as represented in the accompanying cut, completely enveloping the



person in it; this will be sure to extinguish the flame. Then cut the clothing away from the burnt parts, taking care to use no violence where it adheres, nor to break any blisters which may be raised. The great object is now to exclude the air from the blistered or raw surfaces, and it is a usual plan to cover them with flour, and then wrap them in Wadding, or Cotton Wool. A good application is either of the above substances saturated in Lime Water and Linseed Oil, equal parts mixed; this is extremely cool and soothing, and it greatly assists the healing operation; it should not be disturbed for some days, unless the discharge should be great, and the wounds painful, in which case a fresh application of the same should be prepared, and put on immediately on the removal of the other.

Whisky, Brandy, or some other strong spirits, and even Turpentine are recommended by some; but we question if they are so efficacious as the above remedies, and the anguish which they cause at first is a serious objection to their use: the Wadding or Cotton wool covering is sometimes applied quite dry, with good effect; and where the tissues are not deeply or extensively injured, a lotion composed of an ounce and a half of Vinegar to a pint of Water is a good application, as is also a saturated solution of Carbonate of Soda. The flour dredging is that which is the most readily available, and it is perhaps as good as any; it should be applied immediately, and repeated as often as moisture is perceived issuing through the crust which it forms over the burnt parts; if these have fresh sweet oil brushed over them with a feather, previous to the application of the flour, it will adhere better. That which is most to be apprehended in severe burns is the great constitutional depression which often follows the excitement and severe pain, especially is this the case with children, and when the seat of this injury is the chest or abdomen, or other vital part; hence the effects should be closely watched, and stimulants administered, if there are such symptoms as shivering, pallor of countenance, sinking of the pulse, or coldness of the extremities: Ammonia, Wine, or Spirits, must then be given in doses sufficient to arouse the failing powers, without too much exciting the brain. If there is excessive pain, a slight opiate should be administered to allay the irritation of the nervous system, which, however, frequently receives so severe a shock as to lose its sensibility for a time; and when this is the case there is great reason to apprehend a fatal result. A burn, if properly treated, and unless very severe, will generally do well, and require little after-dressing; but if the blisters are suffered to break, and the true skin beneath becomes inflamed by exposure, matter will be secreted, and troublesome ulcerations formed: Bread-and-water poulticing will be the best treatment in this case, with Goulard lotion, if there is much inflammation, or an ointment composed of extract of Goulard, 1 drachm, mixed with 1 ounce of fresh lard; this should be applied spread on soft linen.

When the burn is deep, after the flour has been on for some days, poultices as above should be applied until the coating of flour all comes away, and the wound looks clean and clear; after which the simple water dressing will be best, and when nearly healed the Goulard ointment as above.

When parts immediately contiguous are involved in the burn, care must be taken to interpose dressings, or they may become permanently united.

After the more immediate constitutional effects of a severe burn have passed off, it will be necessary to be careful as to the patient's diet; which should be sufficiently nourishing and stimulative, especially while discharge is going on; taking care, however, to reduce it if febrile symptoms should set in. So constantly are these painful accidents occurring, and so frequently does it happen that, the care of a medical man cannot be obtained for them that, it behoves all heads of families to make themselves acquainted with the best remedial measures. When they are very severe, every possible effort should be made to obtain medical aid; if they are but slight, this may well be done without. It should be borne in mind that the principal aims in the treatment of such cases are, first, the protection of the injured parts from atmospheric influence; secondly, to keep down inflammatory action, both local and constitutional; and thirdly, to soothe the nervous irritation which may arise, and to sustain the system should too great depression take place. See *Scalds*.

BURSÆ MUCOSÆ (Latin, for *mucus bags*). These are little membraneous sacs, situated about the joints of the bones where they work upon each other, and containing an oily kind of fluid, which serves to lubricate the joints, and thus prevent destructive friction. A description of these is called *Bursology* (which see), and *Mucus*.

BUTTER. (Latin *butyrum* from Greek *bous* a cow, and *tuos* coagulum). The oily constituent of cream separated by churning. *Buturine* is the oleaginous principle procurable from butter, and from this again comes *Butyric Acid*, with *Capric* and *Caproic Acids*, which buturine yields, when it is converted into soap. The term is also applied to several butter-like substances, such as Butter of Antimony and Bismuth which are in fact but chlorides.

Whether butter is wholesome, or the reverse, has been a subject of considerable controversy; when fresh, taken in moderation, and mixed with farinaceous substances, it is certainly nutritious, and to persons in a good state of health, wholesome; no doubt in certain states of the system, and of the digestive organs, it is injurious, giving rise to biliary derangements, and all their train of distressing symptoms. If the melting of butter is effected by gentle heat only, it assumes no other condition than that when it is exposed to the heat of the stomach, and it con-

requently must be as wholesome, as if taken solid; its being generally considered otherwise, is to be attributed rather to the excessive quantity taken in the melted state, than to any incompatibility of the butter itself with the due performance of the vital functions. The case is very different when this substance is exposed to a high temperature, as in the process of baking, in pastry; it then undergoes a change in its character, giving out and imbibing certain volatile principles, and becoming indigestible, and consequently irritating to the stomach; this is the case in a greater degree even with rancid butter, which contains certain acids rendering it almost poisonous.

From these remarks, it may be gathered that we do not consider butter taken in moderation, and by persons in a good state of health, to be unwholesome; nevertheless, for those of weak digestive powers, or who are subject to biliary derangements, it will be well to abstain from it, and especially so when it has been changed in its composition by subjection to great heat. See *Bile*, *Indigestion*.

BUTTERMILK. This is the thin acrid fluid which remains in the churn after the separation of the butter is effected; it makes an agreeable and wholesome acidulous drink, either in health or disease, and is especially useful in cases of fever. Artificial Buttermilk may be prepared by putting a quart of milk into a gallon bottle, and shaking it until the butter is separated; fresh air should be occasionally admitted by the removal of the cork.

BUTTER OF CACAO. An oily concrete matter of a firmer consistence than suet, obtained from the Cacao or cocoa palm, which also produces *Chocolate* (which see) and *Cocoa*.

BUXINA. An alkaloid procured from the *Buxus sempervirens*, a plant of the order *Euphorbiaceæ* (which see).

CABBAGE. Under this name are included several species of the genus *Brassicæ*, which also comprehends *Turnip*, *Rape*, *Cole* or *Kale*, as well as the common culinary Cabbage (*Brassicæ Oleraceæ*) of which there are many varieties, all produced by culture. As articles of diet they are wholesome and nutritious; they are not, however, suitable for persons of weak digestion, and being very liable to decomposition, should always be taken fresh.

CACAO. The Chocolate Nut Tree (*Theobroma Cacao*), belonging to the natural order *Sterculiaceæ*, the bruised seeds of which form the agreeable and nutritious beverages called *Chocolate* and *Cocoa* (which see).

CACHEXIA (Greek *kakos* bad, *exos* habit). A bad habit of the body; the term is generally applied to an unhealthy state of the system, resulting from want of nutrition, bad air, or other depressing causes, thus among cachectic diseases are reckoned *Atrophy*, *Scurvy*, *Rickets* (which see).

The deposition of tubercles in the bowels, brain, liver, lungs, or any other organ, is very common in Cachexia, which is found to occur most frequently, in large towns, where people are crowded together, and are obliged to subsist on impure and unwholesome food; they have generally a sickly, sallow look, complain of debility, and often have a distressing cough. Change of air and diet will be the best remedial measures; removal into the country, if possible, or a short sea voyage; let the food be digestible and nourishing, with a frequent variety; fruits are good. Sarsaparilla is frequently found beneficial after a mild course of Mercurials, and, as a tonic, Iodide of Iron, 2 grains, three times a-day, in bitter infusion; or the following formula:—Syrup of Iodine of Iron, and Essence of Sarsaparilla, of each 1 ounce, Water, 6 ounces:—take two table-spoonsful three times a-day with, if the bowels are sluggish, a Compound Rhubarb Pill every, or every other, night: if the evacuations are deficient in bile, a Plummer's Pill, at bed-time, for six nights or so will be beneficial.

CADMIUM. A metal sometimes found in combination with Zinc ore. The Sulphate of Cadmium is occasionally used for the same purposes as that of zinc. When given internally, which is very seldom, the dose is from a $\frac{1}{4}$ grain to 3 grains, it should be rubbed down with sugar. As a Collyrium, with or without Opium, it may be used with advantage; about 3 grains to an ounce of distilled water is the proper strength.

CADUCA (Latin *Cado*, to fall). The deciduous or falling membrane of the uterus, so called because it is cast off therefrom. See *Uterus*.

CÆCUM (Latin *Cæcus*, blind). This is the commencement of the large intestine, at its point of junction with the alimentary canal, it is described by anatomists as a blind pouch, or cul-de-sac, about two inches and a-half in length, forming, as it were, the outer court or vestibule of the intestine of which it is the most dilated portion: it has a tube-like appendix, which is usually equal in diameter to a goose quill, about five or six inches long, and more or less coiled upon itself, being retained in the coil by a fold of the *peritoneum* (which see), also *Alimentary Canal* and *Intestine*.

CÆCITAS (Latin *Cæcus*, blind). A term signifying *Blindness* (which see).

CÆSARIAN OPERATION. This is one of the most critical of surgical operations; and is only resorted to in cases of absolute necessity; when child-delivery can in no other way be effected, an opening is made through the parietes of the abdomen and uterus for the purpose of accomplishing the object, this is the *abdominal* Cæsarian operation; there is another, less dangerous, called the *vaginal*, which is an incision occasionally made into the *cervix uteri* with a view to facilitate delivery. Sometimes, also, when the fœtus, in consequence of a rupture of the womb, escapes into the cavity of the peritoneum, or lies in the ovary, where there is an extra uterine conception, an opening is made for its extraction. It would be useless to attempt any description of these operations, as none but a skilful surgeon could attempt them. It is said that the birth of Julius Cæsar was effected in this manner, hence the name given to this process. See *Hysterotomia*.

CAJEPUT OIL (*Oleum Cajeputi*). The volatile oil obtained from the leaves of a plant called the *Mælaleuca minor*, of the natural order *Myrtaceæ*. This oil is a diffusible stimulant, carminative, anti-spasmodic, and sudorific, useful in hysteria,



all flatulent disorders, rheumatism, and low fevers; the dose is from 3 to 10 minims. Cajeput Oil, $\frac{1}{2}$ a-drachm; Castor Oil 1

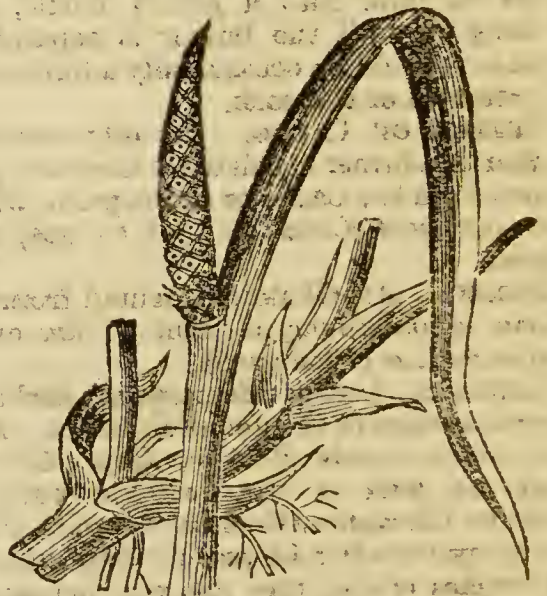
drachm; Olive Oil, $4\frac{1}{2}$ drachms, is a good liniment; if a stronger stimulant for rheumatism is required, use this:—Soap Liniment, Camphor Liniment, and Cajeput Oil, of each an ounce; mix and rub well in. See *Counter Irritation*.

CAFFEINE. A white, crystalline, volatile matter found in coffee, of which it is the characteristic principle: it consists, in 100 parts, of carbon, 46.5; hydrogen, 4.8; oxygen, 27.1; nitrogen, 21.6; and in its constitution closely resembles that of animal muscle (see *Coffee*), in which is also found *Caffeic Acid*, wherein consists much of the peculiar odour of the plant; this acid combined with Alumina, Lime, Iron, and Magnesia, forming what are called *Caffeates* of those bases.

CALABASH. The Pumpkin Gourd of tropical countries, from the seeds of which is prepared an acidulous drink very refreshing in fevers, stranguary, &c.

CALAGUALA. A species of *Aspidium*, the root of which is used, in America, in dropsy and other diseases.

CALAMUS (Latin for a reed). The root of the *Acorus Calamus* or Sweet Flag, a plant of the natural order *Acoraceæ*, is sometimes employed medicinally; it is an aromatic stimulant, and has the advantage of rarely causing febrile excitement; it has been employed chiefly as an adjunct to



other stimulants and tonics; in weakness of the digestive organs, such as often occurs in gouty subjects, in atony of the stomach, agues, and asthenic fevers, it has been found beneficial: dose of the Powdered Root, from 15 to 40 grains; of the Infusion, from 1 to 2 ounces; of the Tincture, $\frac{1}{2}$ a drachm to $1\frac{1}{2}$ drachms. Outwardly, it is employed in stimulating baths and lotions.

CALAMUS SCRIPTORIOUS (Latin, for a writing pen or reed). A groove with a pen-like termination in the fourth ventricle is so called. See *Heart*.

CALAMINE (Latin *Calamus*, a reed). This is an impure Carbonate of Zinc, usually presented in the form of a reddish grey powder; it was formerly much used to sprinkle over wounds and excoriations, and is still so employed to some extent, although much better applications may be found. The *Ceratum Calaminæ* of the Pharmacopœia, is a good dressing for foul ulcers; under the name of *Turner's Cerate* it is much used, as a dressing for cuts and wounds. The mode of preparation is as follows: take of Bees' Wax, $7\frac{1}{2}$ ounces, Olive Oil, 1 pint, melt and mix; when nearly cold stir in $7\frac{1}{2}$ ounces of Prepared Calamine; keep stirring until the mixture is well set.

CALCANEUM (Latin *calx*, the heel). Hence *calcar*, the *os calcis* or *heel bone* (which see).

CALCIS or **CALX** (Latin for *lime*, which see), hence, also, we have *calcareous* applied to a class of earths composed of lime and carbonic acid, as chalk, marble, &c. *Calcination*, the process of forming a calx or oxide, as lime, from chalk, by exposure to heat in the open air, by which means the carbonic acid is driven off. *Calcium* the metallic base of lime, and—

CALCULUS. A solid or unorganized concretion found in the human body; it may be 1st, *Pulmonary*, formed in the *Lungs* (which see); 2nd, *Biliary*, formed in the Gall Bladder, and consisting of Cholesterine and the yellow resinous matter of the *Bile* (which see, and *Gall Stone*); 3rd, *Gouty*, formed in the joints of gouty persons, and consisting of Nitrate of Soda and Phosphate of Lime (see *Gout*); 4th, *Intestinal*, found in the stomach and intestinal canal, and consisting of various components; 5th, *Salivary*, formed in the *Salivary Glands* and *Ducts* (which see), and consisting principally of Carbonate of Lime; 6th, *Urinary*, formed in the *Kidneys* or *Bladder* (which see) also *Gravel* and *Stone*. There are other formations of the kind which take place in the *Liver*, *Pancreas*, *Pineal Gland*, *Prostrate*, and *Spleen*, all of which see.

It should be understood that the word *calculus* means a small pebble, such as the ancients made use of in teaching, or practising *calculations*, and the likeness of these hard masses of various kinds of *calculi*, to lumps of stone, or pebbles, is the reason of their being so called. One of the most familiar instances, of the formation of *calculus*, to which we can call the reader's

attention, is that which is deposited from the saliva and mucus of the mouth between the teeth (see *Tartar*). For those which are formed in the internal viscera, medicines may afford a certain amount of relief, but can never effect a cure. The nature of the remedies must depend very much upon the part in which the deposit takes place; if, as in the bladder, it be accessible for instruments, it may be extracted whole, or broken up so as to pass with the urine. See *Lithotomy*.

In weight, calculi vary from a few grains to a pound or two; but they seldom in the human body exceed one or two ounces; according to Dr. Wollaston, who has devoted much attention to an investigation of their nature, they may be classed thus, placing them in the order of their frequency:—1st, Uric Acid; 2nd, Oxalate of Lime, called the Mulberry Calculus from its dark colour and rough surface; 3rd, Ammoniac-Magnesian Phosphate, called also the Triple Phosphate; 4th, Phosphate of Lime, or Bone-earth Calculus; 5th, Fusible Calculus, or combination of the last two species, and so called from its fusibility under the blow-pipe; 6th, the Mixed Calculus, composed of several of the other kinds confusedly mixed; 7th, Urate of Ammonia; 8th, Carbonate of Lime; 9th, Cystic Acid; 10th, Xanthic Oxide. The last three are extremely rare.

CALEFACIENT (Latin *Calefaceo*, to make warm). Applied to warm medicines and stimulant applications, as the *Emplastrum Calefaciens* of the old Pharmacopœias, a compound of Burgundy Pitch and other stimulants; it is not now much used. See *Plaisters*.

CALENTURE (Latin *Caleo*, to be hot). A violent fever attended with delirium, incidental chiefly to persons in warm climates. See *Fevers*.

CALIGO (Latin for darkness). Applied to diseases of the eye which produce dimness or obscurity of vision; as *C. Lentis*, the true cataract; *C. Corneæ*, opacity of the cornea; *C. Papillæ*, blindness from obstruction of the pupil (see *Amyosis*, *Synchisis*); *C. Humoræ*, blindness from error or defect in the humours of the eye; *C. Palpebrarum*, blindness from disorder in the eyelids. See *Blindness*, *Eye*.

CALLUS (Latin for hardness). Applied to new bone deposited in fractures, hence *Calli*, gouty deposits (see *Calculi*), and *Callosities*, horny substances. See *Corns*, *Nails*, &c.

CALOMEL. Chloride of Mercury, a preparation much used by medical practitioners of all countries. See *Mercury*.

CALOR (Latin for heat). Hence we have *C. Fervens*, boiling heat, 212° Fahrenheit; and *C. Lenis*, gentle heat, from 90° to 100° Fahrenheit, applied to the temperature of air, water, &c.

CALOR MORDICANS (Latin for a biting heat). This is a term applied to a dangerous symptom in typhus fever, being a pungent heat upon the skin, which, if touched, leaves a smarting sensation upon the fingers for several minutes after.

CALORIC (from the same root). The cause of a sensation of heat derived from a fluid diffused through all bodies, or, as it should perhaps be defined, a certain condition of these bodies, thus, coldness is the absence of Caloric. It has been distinguished as 1st, *Sensible* or *Free*, when it produces the sensation of heat, or affects the thermometer, or having reference to bodies of which the form is permanent; 2nd—*Insensible*, formerly supposed to be latent or combined, that is, when passing into bodies during a change of form, without elevating their temperature, as into ice at 32° as it becomes water; or into water at 212°, as it becomes steam or vapour; 3rd—*Specific*, signifying the unequal quantity of Caloric required by similar quantities of different bodies to heat them equally; thus the specific Caloric of water is twenty-three times as great as that of mercury; this quality of bodies is called their capacity for Caloric. Then we have the *Absorption*, *Conduction*, *Diffusion*, *Effects*, *Evolution*, and *Radiation* of Caloric, all of which might be dwelt on at considerable length, but the above, with the information furnished under the heads *Air*, *Atmosphere*, *Heat*, &c., will be sufficient for our present purpose. Let us add to this, that besides the *Thermometer* (which see), there are instruments called the *Calorimeter* and *Calorimotor*, the first for measuring the heat given out by a body on cooling, and the second for evolving caloric.

CALUMBA, or **CALUMBO**. The root so called, which is much valued as a stomachic bitter, is that of the *Cocculus Palmatus*, a native of the forests on the east coasts of Africa; it has a faintly aromatic odour, a bitter and slightly acrid taste; its active principle is *Calumbine*, which may be obtained by means of Alcohol or Ether. Containing nothing which is incompatible with the salts of Iron, its Infusion forms a good vehicle for them; it is prepared by pouring upon 5 drachms of the sliced root, a pint of boiling rain or distilled water, macerate for two hours in a covered vessel and strain. There is also a Tincture of which a dose may

be taken, in water, twice a day. The dose of the former is from 1 to 2 drachms; of the latter from 5 to 10 grains.

Calumba appears to act chiefly upon the mucous membrane of the stomach, and upon the secretion and quality of the bile; being free from astringency, slightly sedative, there is, perhaps, no tonic so well adapted for those of weak and dyspeptic constitutions: to such it may be given in powder, combined with Carbonate of Soda and Ginger, in the proportion of 8 drachms of each of the former to 2 drachms of the latter; taking $\frac{1}{2}$ a teaspoonful in a wine-glassful of water about an hour before or after each principal meal; or it may, perhaps, be more agreeable to add the Soda to an Infusion of the Calumba root and Ginger; this infusion should be made fresh every day, especially in warm weather. See *Tonics*.

CALVARIA (Latin *calvus*, bald). The upper part of the cranium; from the same root comes also

CALVITES, *Baldness* (which see).

CALYSAYA is the name of a pale kind of *Bark* (which see), also *Cinchona*.

CAMBOGIA. The Latin name of the gum resin, much used in medicine as a drastic purgative, which is the produce of an uncertain species of *Garcinia*. See *Gamboge*.

CAMPEACHY WOOD. So called from the place from whence it is chiefly brought, used in dyeing and also medicinally. See *Logwood*.

CAMPHOR (Arabic, *Camfur*). A volatile and highly inflammable gum, or concrete juice of the *Camphora officinarum*, belonging to the natural order of *Laraceæ*. By some chemists, the term is applied to all volatile oils which are concrete at the ordinary temperature, and do not, when in that state, contain any appreciable quantity of fluid oil: thus we have Camphor of Tobacco, of Anemone, of Elecampane, &c. There is also an artificial camphor, which is produced by passing Hydro-chloric acid gas through Oil of Turpentine. *Camphoric Acid* is procured by digesting Camphor in Nitric Acid; its salts are called *Camphorates*, but of little or no medicinal value. Camphor itself is a white brittle substance of a very peculiar, fragrant and penetrating odour; bitter, pungent, and aromatic taste. It is so extremely light that it floats upon water, and extremely volatile and inflammable, burning with a brilliant light and much smoke; it is soluble in water to the extent of about $\frac{1}{2}$ a grain to an ounce; alcohol will take up half the weight of the gum; oils, both fixed and volatile, will dissolve a consider-

able quantity, especially if their temperature be raised; Sulphuric and other Ethers are among its most potent solvents, but the most so of any is strong Acetic Acid. It may be suspended in mixtures by trituration with sugar, almond emulsion, mucilage, or yolk of egg: if rubbed down first with a small quantity of spirit, it readily blends with any desirable liquid. In its medical properties, Camphor is diaphoretic, antiseptic, stimulant, anti-spasmodic, narcotic, and externally anodyne. It is good in typhus, confluent small pox, and all fevers and eruptions of the typhoid class; also in measles, febrile delirium, hiccup, asthma, hysteria, epilepsy, atonic gout, mania, melancholy, and acute rheumatism, &c. It exhilarates in moderate doses, and raises the pulse without producing febrile symptoms; it also promotes perspiration, and, in certain states of the body, it induces sleep, when Opium fails to do so; but its effects are transient, and therefore it requires frequent administration. It is, to a certain extent, a corrective of the bad effects of drastic purges, diuretics, powerful stimulants, and narcotics; if taken in excessive doses it occasions anxiety, vomiting, syncope, and delirium, for all which effects Opium is the best counter-acting remedy. It is given in doses of from 5 to 20 grains, in pills, powder, and emulsions; its chief officinal preparations are: Camphor Mixture, dose from 1 to 2 ounces, made by simply putting a lump of the gum in cold water, and letting it stand for a few hours; Tincture of Camphor, dose 30 to 60 minims; Compound ditto, (see *Paregoric Elixir*) 1 to 3 drachms; Camphorated Emulsion, dose from $\frac{1}{2}$ an ounce to 2 ounces; Camphor Liniments, simple and compound, Soap Liniments, and Spirits of Camphor, are used externally as stimulants and counter irritants. Rubbed down with Prepared chalk, in the proportion of 1 drachm to the ounce, it makes a good tooth-powder: sniffed up the nostrils it relieves cold in the head; the vapours inhaled by means of a tube like a cigar, are useful in affections of the chest: a piece held in the mouth is thought to be a good protection against fevers and other infectious diseases; finally, its strong odour protects animal substances from the ravages of insects.

CAMPHORIC ACID is made by digesting Camphor in Nitric Acid; its salts are called *Camphorates*. Some chemists call any volatile oil which concretes at the ordinary temperature, provided it does not contain any notable quantity of fluid oil, *camphor*; thus we have *Camphor of Tobacco*, &c. There is also an *Artificial Camphor*, resembling the

natural in smell, and somewhat in appearance, which is obtained by passing Hydro-Chloric Gas through Oil of Turpentine.

CANALIS (Latin, *canna*, a reed). A canal, from whence comes *C. arteriosus*, a blood-vessel which unites the pulmonary artery and aorta in the *fœtus*, (which see); *C. venosus*, a canal which conveys the blood from the *vena porta* of the liver to the ascending *vena cava* in the *fœtus*. *C. Petitanus*, so called from M. Petit, a triangular cavity formed by the separation of the anterior lamina of the crystalline lens from the posterior, (see *Eye*); also *Canula*, a small tube, generally applied to that of an instrument called the *Trochar*, (which see).

CANCELLI, (Latin for lattice-work). The spongy substance of the *Bones*, (which see).

CANCER, (Latin for a crab). This is a malignant disease, called by the Greeks *Carcinoma*, one of the most fearful with which medical science has to contend; it has two principal form of developments, viz., *scirrhus* or *occult*, and *ulcerated* or *open*, sometimes also called *hard* and *soft*. Many other terms are used to distinguish the differences observable in the rise and progress of this disease, one form frequently passing into the other, the scirrhus becoming ulcerated, and so on; we need not trouble our readers with these scientific terms, the above general arrangement into two classes being sufficient for our purpose.

The first manifestation of Cancer being in the skin, it has been considered by nosologists as a cutaneous disease, and arranged under the order *tubercula*. All parts of the skin are liable to its attacks, but those which appear to be most so are, the integuments of the face, the female breast, the uterus, and the organs of generation in both sexes; it sometimes affects the hands, and occasionally, from certain local causes, the male scrotum. When Cancer attacks the face, or any exposed part, it commonly begins with a small indurated spot resembling a tubercle or wart; there is no appearance of inflammation, nor is there particular sensitiveness. This condition of things often continues for a very considerable time; sooner or later, however, ulceration sets in, although it probably is long before it penetrates deeply; there may be matter secreted, which drying, forms a scab over the seat of the disease; by and bye, sharp, shooting pains will be felt, the intervals between them at first long, diminishing by degrees, until they become almost constant; there is a gradual, although slow enlargement of the tumour, which is at

first moveable, but becomes afterwards attached to the skin and adjacent tissues; the ulceration spreads and deepens, and eventually becomes an open sore, with thick, hard jagged edges, and a soft centre, eaten, as it were, into irregular hollows; the discharge is thin, bloody, and irritating to the surrounding parts; there is inflammation, and hardening of the absorbent glands about the seat of disease, and the whole of the tissues appear to be invaded by a cartilaginous kind of growth, which spreads among and through them, like the creeping roots of some parasitic plant. It sometimes happens that there is extensive sloughing of the whole diseased mass, which comes away, leaving a healthy wound which heals by granulations, and happy is it for the patient when such is the case; most commonly the disease creeps on like a secret miner, investing the very citadel of life, the heart, if it be situated near it, or some other vital organ, and after, a term of, it may be years, the patient sinks exhausted by the pain and continual drain upon the system.

We have here briefly traced one of the forms in which cancerous disease is developed, proceeding as we have seen from scirrhus, or occult, to open, or true Cancer, as it is sometimes called: the first stage is distinguished by induration, coldness, insensibility, and deficiency of colour, all indicating a low state of vitality; the characteristics of the second stage or condition are tenderness, soreness, presence of colour, often approaching to a purple tint, bloody and serous discharge, cutting and throbbing pain, evidences of activity and progression.

Although mostly confined to the glands, and to certain parts, as the female breast and womb, the stomach, the liver, and the testicles, yet there are few organs or tissues of the body which may not become the seat of this truly malignant disease; thus we find it sometimes seizing on the brain, the eye, the lip, the cheek, the nose, or the tongue, and it may perhaps have made considerable progress before its presence is suspected, coming like a mere pimple or hardening of the skin. Those attacked by it are mostly beyond thirty years of age, and are frequently persons of a scrofulous habit; there can be no doubt that it sometimes proceeds from hereditary taint; that it has been produced by contact, although it can scarcely be called a contagious disease. It may be excited into activity by the sudden application of cold, or by a blow, or by great anxiety, or trouble of mind. Some irritating substances seem to

have the power of producing it; soot certainly does, hence the prevalence in sweeps of *Cancer of the Scrotum*, of which we shall presently speak more fully. Women are more subject to it than men, and married more than single women; statistics completely refuting the theory that celibacy favours the development of the disease, which most usually takes place about the time when the menstrual discharge ceases, as though the healthy balance of the system had been hitherto kept up by this periodic discharge, and was now destroyed.

With regard to the often mooted question, is Cancer curable? although quacks and empirics may declare that it is, true science makes no such positive assertion. Quackery says,—it can be cured without the knife; but this we do not believe, and so rarely with, that the exception but strengthens the rule. Are palliative measures then all that should be resorted to? our readers would ask: nay, there is a chance of preserving life, which is dear to all, for some years at all events; therefore, if circumstances admit of it, and the patient is desirous that it should be so, let the trial be made, and made as it only can be, by the aid of the highest surgical skill.

Considerable difference of opinion exists as to the *treatment* of persons suffering under this disease; while some would keep them on a diet barely sufficient to support life, others, among whom is Sir Astley Cooper, say that a good nourishing diet is required; and this would seem to be the more rational course, certainly so in the later stages, when the free discharge and constant pain wear out the strength and reduce the system; stimulants, of course, must be avoided as much as possible, especially, those of an alcoholic nature. The above authority does not believe in the possibility of curing scirrhus cancer, all applications and medicines he considers therefore as merely palliatives, and this is the view taken of them by most really scientific men. It will be evident, therefore, that the avoidance of all which may tend to excite the disease to activity is a paramount object, for the attainment of which, perfect rest of body and mind, as far as this is compatible with a due performance of the functions of vitality, should be enjoined; the biliary and other secretions are to be carefully watched, and such medicines administered as may be necessary to keep them in a healthy state. Gentle aperients should be occasionally given, and those of an alterative nature are to be preferred; such as 5 grains of Plummer's Pill, at bedtime

and a Rhubarb draught in the morning; drastic purgatives, such as Jalap, Scammony, &c., are to be avoided, and also, as a general rule, salines. With regard to local applications, in the earlier stages, trial may be made of Iodine rubbed in in the form of ointment, which has, on some few occasions, been found capable of dispersing hard swellings supposed to be cancerous; a plaister composed of Mercury and Ammoniacum has also been recommended; stimulating applications are decidedly objectionable, although they are sometimes used. When the tumour has passed into the soft state, or the sharp shooting pains have commenced, it is time to begin the administration of sedatives; Hemlock is that generally recommended; the soft extract given as pills in 5 grain doses, or the Insissipated juice, $\frac{1}{2}$ a drachm, or the powdered leaves, from 3 to 10 grains; this, or Henbane, or the two in combination are serviceable, both internally and applied as poultices. Opium in its several forms is also given, but it has a tendency to confine the bowels; Belladonna and Stramonium, too, may be tried should the above not have the desired effect, but it should be only under the direction of a medical man. Bichloride of Mercury given in combination with Tincture of Bark, Decoction of the same, or of Sarsaparilla, is sometimes administered; of the latter named root, the Extract or Decoction is a favourite remedy. Gentian, and Quinine, and the various preparations of Iron, Iodide of Potassium, Cod-liver Oil, Infusion of Malt, the mineral acids, especially Nitric, and Arsenic, in the form of Fowler's Solution, have all their advocates, and all their peculiar advantages depending upon constitutional and other differences. Some use the Phosphate of Iron, made into a paste with water, as a local application; or a solution of the Muriated Tincture of Iron; some Arsenical Ointment; some evaporating Spirit Lotions; some Lime-water and Linseed Oil; and some warm poultices. But again says Sir Astley Cooper, "it is all nought; cold or hot, they are alike useless; the best dressing for the ulceration is prepared thus:—1 ounce of Soap Cerate, 1 drachm of Extract of Belladonna, melt and mix;" if there is much inflammation, he does not object to the use of leeches. When the discharge is offensive, add a little Solution of Chloride of Lime, or Soda, to the lotion. We need scarcely enlarge upon the absolute necessity for extreme cleanliness; the wound when it is discharging must be frequently dressed, and the patient's linen often changed, or the fetor will become intolerable.

In some cases of scirrhus Cancer, pressure has been applied with a certain amount of success; shields of sheet-lead of various thickness, or tin plates, have been placed over the tumour, over these, strips of adhesive plaster, and then linen compresses and roller bandages; in open Cancer, the wound has been filled with powdered chalk, and thickly dusted with starch powder, covering the more irritable surface with gold-beaters skin. In this mode of treatment, care is taken to have the plaster and bandages evenly applied, and the cavities so filled up that pressure on the part be firm and even, without partial stricture. But we might fill a volume were we to enter fully into all the various modes of treating Cancers, the real or pretended remedies for which, are indeed too numerous to mention; a qualified practitioner only can judge of the means best adapted for particular cases.

If the Cancer be in the womb, a horizontal position should be maintained; the lotions can only be applied as injections, and no dressing on the immediate seat of the disease is possible, although a solution of Iodine, or other preparation, may be applied, by means of a camel-hair brush; leeches to the loins and groins may be applied if there is much inflammation, the warm hip-bath used daily, and opiate lavements administered, with a suppository at night. There should be abstinence from sexual intercourse, and perfect quiet. If the cancerous ulceration be on the tongue, it should be brushed over several times a day with a camel-hair pencil dipped in the following composition: Borax and Hemlock powdered, of each 1 drachm; Honey, 1 ounce; it is well also to apply to the surface once a day, or so, a brush dipped in Muriated Tincture of Iron.

When the ulceration is on the face, the same applications may be used, or Arsenical Solution of Potash, or Lime-water with Calomel—the Black Wash as it is called. In this situation, Cancer is sometimes confounded with *Lupus*, (which see); but whereas the former at its commencement is hard and colourless, the latter is soft and of a bright red colour; the cancerous tubercle, too, is single, but in *lupus* there are usually two or more spots.

An operation for Cancer should be performed in the indolent stage of the tumour; that is, while it is hard and moveable, before it has become attached to the surrounding tissues, from which it will be difficult if not impossible to extirpate it, when the disease has passed into the ulcerated state, and the absorbent glands have become

affected. In operating thus, in the early period of the disease, there is a chance that the whole of the tumour may be removed, especially, as is recommended, if a considerable portion of the healthy substance be cut away with it; but it generally happens that the patient's mind is not made up until the symptoms become really alarming, and the suffering great. Then, when the operation is performed, the parts may unite, the wound may heal, and all for a time appear to go on well; but sooner or later the disease will be pretty sure to show itself again, and this time its progress will be more rapid than at first.

We have spoken of what surgeons call *Cancer Scroti*, Cancer of the Scrotum, or Chimney Sweep's Cancer, which is supposed to be produced by the irritation of the soot on the delicate lining membrane of the *Scrotum*, (which see). As in the other forms of scirrhus, there is first an indurated enlargement of the integuments, which may remain for a long time without any apparent increase, and will then start into activity, suddenly going off into an ulceration, extending over the whole of the scrotum, and finally passing into the peritoneum, and probably extending thence to the testes, and the glands of the groin. Local application may sooth the pain, and destroy the fetor of the discharge, and medicines, such as we have already mentioned, may mitigate the violence of the symptoms, and support the system for awhile; but nothing will stay the progress of the disease, which must eventually prove fatal, if an early recourse is not had to the knife, which after all may not effect the desired object.

CANELLA BARK (Latin *Cortex Canellæ*;



sometimes called the Wild Cinnamon.) The inner bark of the young branches of the *Canella alba* (White Canella), a plant of the natural order *Meliaceæ*, has aromatic and tonic properties, and is sometimes used as a spice; the dose of the Powder is from 15 to 20 grains. In combination with Aloes it forms what was at one time a favourite stomachic purgative, called *Hiera Picra* (which see).

CANINE TEETH (from the Latin *Canis*, a dog). The four teeth, two on each side, which immediately adjoin the incisors; they are sometimes called the Eye teeth, or *Cuspidatæ* (which see), also *Teeth*.

CANKER (Latin *Cancrum oris*, canker of the mouth). This is a gangrenous inflammation which chiefly affects the cheeks and gums of children of a weakly scrofulous habit, with constitutions debilitated by want of wholesome food, impure air, and all the bad influences of poverty and wretchedness, which surround so many of the poorer classes. Very frequently the disease shows itself soon after measles, scarlet fever, or other acute inflammatory affections. Its first symptom is usually a hard red spot on the cheek, which spreads and opens into a shallow ulcer on the inside, discharging matter of a peculiarly offensive character. As the disease progresses, the cheek swells, the breath becomes foetid, there is a great flow of saliva, which is often tinged with blood, there is mortification of the surrounding parts, including the gums, the teeth drop out, typhoid symptoms show themselves, and, finally, the patient sinks exhausted, death coming like a happy release from its sufferings. This is the usual course, if early efforts are not made to arrest the progress of the disease. As soon as the red spot in the cheek gives warning of its commencement, the constitution should be strengthened with good nourishing diet, such as Beef Tea, Milk, and Eggs, if the stomach will bear them; Wine if there is extreme debility, and no great amount of fever. Quinine in $\frac{1}{2}$ grain doses three times a day, in Infusion of Gentian, or Decoction of Bark, may be given, or some preparation of Iron with a warm stomachic; the following mixture is perhaps as good as any—Wine of Iron, 2 drachms; Compound Tincture of Cardamums, or of Valerian, 2 drachms, made up to 8 ounces with Cinnamon or Mint Water. one or two tablespoonsful twice or thrice a day. Change of air, sea bathing, and anything which is likely to invigorate the constitution should also be tried. Chlorate of Potash, 1 drachm, with 20 drops of Muriatic Acid, in six ounces of Water sweet-

ened with a little syrup of Orange Peel is a pleasant and serviceable mixture; it may be given to a child six years of age, a table-spoonful about every four hours. For local treatment, Lunar Caustic, or Sulphate of Copper, rubbed along the edges of the wound are recommended. The mouth should be frequently washed with a lotion made of Chloride of Soda and Water, in the proportion of 2 drachms of the former to $\frac{1}{2}$ a pint of the latter; or it may be, 1 drachm of Chloric Ether to the same quantity; by this means the unpleasant fœtor is diminished so as to be endurable. When extensive ulceration and sloughing takes place outwardly, poultices must be applied. Canker may be produced by the contact of copper or brass with the inside of the mouth; it is very often attributed to mercury, but this can only, when given in large doses, contribute to its development. See *Gangrene*, *Mortification*, *Mouth*.

CANNABIS INDICA, (Latin for Indian Hemp). This is no doubt the same species as the *Cannabis sativa* of botanists; but, growing in hotter climates it secretes a resin, and has medical properties which its European congener possesses not at all, or in an inferior degree. It is narcotic, anodyne, and



antispasmodic, and produces a peculiar kind of delirium and catalepsy. In neuralgia and painful rheumatic affections, tetanus and hydrophobia, it has been recommended, and with some success, more so in the East than in our Northern clime. The resinous Extract is that which is principally employed, the dose being from 2 to 10 grains; of the Tincture from 15 minims to a drachm or more

is given, the larger quantity every half hour in tetanus; of the active principle, *Cannabine*, $\frac{1}{2}$ a grain to a grain; a medium dose has acted as a powerful narcotic. Of the common European Hemp, the seeds are the only parts used; they are chiefly given in chronic inflammation of the mucous membranes, and also in jaundice.

CANTHARIDES (Greek *cantharis*, a beetle). The Blistering or Spanish Fly; (see *Blisters*, *Lyttæ*). Not only is this insect of the beetle tribe, much used as a blistering agent, but it is also given internally, acting chiefly as a stimulant of the urinary organs; it has been found especially useful in obstinate gleet, paralysis of the bladder, and as a diuretic in atonic dropsy, as well as in some diseases of the skin, such as *Lepra* and *Psoriasis* (which see). It should, however, be administered with great caution, as an overdose will very likely produce *Strangury* (which see), and set up inflammatory action which may lead to fatal results. The best remedies are clysters of Starch and Linseed Tea, with or without Laudanum, Milk, Emulsions of Acacia, and other demulcent drinks; bleeding if there is much fever, warm baths, and aperients and nauseating medicines. Camphor has been highly recommended in a case of this sort, but we question its efficacy; Calomel may be given with advantage in small and frequent doses. Besides the blistering preparations, such as ointments and plaisters already spoken of, there is a Cantharides Liniment and other compounds, used as stimulants and rubefacients.

CANTON'S PHOSPHORUS. This is a substance made by exposing calcined oyster shells and sulphur to a red heat; it is properly a sulphuret of *Lime*, which see.

CAOUTCHOUC. An elastic gum being the concrete juice of the *Hævea Caoutchouc* and several other plants. See *Indian Rubber*.

CAPELINA (French *capeline*, a woman's hat). A kind of double-headed roller used to bandage the head. See *Bandages*, *Rollers*.

CAPILLARY (Latin, *capillus* a hair). A term applied, 1st. to the vessels which pass between the minute veins and arteries; 2nd., to a small crack or fissure (*capillatio*) in the skull; 3rd., to tubes so small as to be likened to hairs, being less than the 20th of an inch in diameter; 4th, to the attraction by which a liquid rises in a *capillary* tube higher than the fluid which surrounds it.

CAPILLUS. The hair in general. See *Hair*.

CAPISTRUM (Latin for a bridle). The single split cloth bandage used to support

the lower jaw, so called from its resemblance to a bridle. See *Bandages*.

CAPSICUMS. The pungent berries of the *Capsicum fustigratum*, and some other species of plants of the natural order *Solanaceæ*, are employed medicinally; they are powerfully stimulant, and are useful in atony of the stomach, and the dyspepsia of gouty and debilitated subjects. They are taken also with a vegetable diet to prevent flatulency, and may be recommended for gargles in malignant sore throats, and re-



laxed states of the uvula and other organs of that part, as well as in chronic hoarseness. The dose of the Powder is from 2 to 8 grains; of the Tincture from 10 to 60 minims; there is a concentrated Tincture good as an external stimulant for chilblains, and a Capsicum Lozenge, of which one may be put into the mouth and allowed slowly to dissolve, about three times a day. Persons who are subject to cold feet are sometimes recommended to wear socks dusted with *Cayenne Pepper*, which is a mixture of the dried pods of several species of Capsicums, but more especially of the *Capsicum baccatum* (Bird Pepper); there is commonly Muriate of Soda (Common Salt) mixed with this, and some colouring matter not always of an innocent nature, Red Lead having been detected in the composition; if the presence of this poisonous ingredient be suspected, boil some of the powder in Vinegar, filter the solution, and add to it a little

Sulphuret of Soda, should lead be present, there will be a white precipitate, which, on being dried, exposed to heat, and mixed with charcoal, will yield a globule of the metal.

CAPSULE, (Latin *capsa* a chest). A membranous bag which encloses any part; thus in surgery, we have the *Capsule of Glisson*, the fibrous envelope of the liver, and the *Capsular Ligament*, which contains the synovæ of the joints.

CAPUT, (Latin for the head). It includes, 1st, the *skull* or *cranium*, (which see), consisting of the following parts, the *vertex* from *verto* to turn, the crown; the *sinciput*, perhaps from *semi caput* half the head, the front part of the skull; the *occiput*, from *ob caput*, opposite to the former, the hind part; the *tempora*, or temples. 2nd, the *face*, (Latin *facies*) including the *forehead*, *eyes*, &c., all of which see. The term *caput* is also applied as follows, *C. coli*, the head of the colon—the cæcum or blind intestine; *C. gallinaginis*, (wood-cock's head), a small eminence in the urethra at the termination of the ductus ejaculatorius; *C. obstipum*, (stiff head), wry neck, (see *torti collis*); *C. papavaris*, capsules or heads of the Poppy, (which see.)

CARATTI. A species of Camphor, which exudes from the bark of a tree, is so called in South America. See *Camphor*.

CARBAZOTIC ACID. An acid formed by the action of Nitric Acid on Indigo, consisting of carbon and azote; its salts are called *Carbazotates*.

CARBO LIGNI (Latin for charcoal of wood). This substance, which is antiseptic and styptic, is used for a variety of purposes. See *Charcoal*.

CARBON (Latin *carbo*, a coal). This is the pure inflammable principle of *Charcoal* (which see): the diamond is Carbon in a state of absolute purity. Carbon forms a large proportion of all organic substances: it unites with Hydrogen to form *Carburetted Hydrogen Gas*; and with Oxygen to form *Carbonic Acid Gas*, which is always produced by the combustion of any material containing Carbon, in atmospheric air; or by the decomposition of Carbonates of Lime, Potash, Soda; or by an acid which has a stronger affinity for the base than it has for it—such as Lemon Juice, Citric, or Tartaric Acid; added to a solution of either of these Carbonates, a brisk effervescence ensues, which is caused by the liberated gas making its escape from the fluid. This gas is also given off by the lungs in the act of respiration; it is destructive of animal life when in excess, as in the foul air of wells, mines,

and other close places—about lime kilns, and in confined spaces where charcoal is burned. It is a beautiful law of nature which maintains the equilibrium between animal and vegetable life; the former inhaling Oxygen and exhaling Carbon; while the latter absorbs the first of these atmospheric constituents, and gives out the last. A knowledge of this law has lately been turned to account in the formation of Aquaria; wherein the purity of the medium is preserved by a due arrangement of the living animals and vegetables placed therein. It is of Carbon that the substance of all vegetation is mainly composed, and it enters largely into the more solid tissues of the animal frame, besides subserving some of the most important functions of life. It is believed that this element, in its combination with oxygen, inhaled by the lungs, is the medium by which the animal temperature is maintained; hence the necessity for keeping up the supply of such nutriment as will furnish it in sufficient quantity. We may notice that in long illnesses, when patients are unable to take this, the temperature of the body becomes greatly reduced; and if soups, jellies, wines, and other carbon-supplying food be not given, death, from extreme cold, will ensue. So we find, in the frigid north, that the food consists chiefly of animal fats and oils—while, in tropical countries, it is watery fruits and grains.

CARBONIC ACID GAS. We have already spoken of this as the deleterious air, the inhalation of which has been so frequently attended with fatal consequences. Its composition is about one part of carbon to two of oxygen; it is therefore heavier than common air, and has a tendency to sink and collect in the lower parts of wells, holds of ships, brewers' vats, and mines, where it is commonly known as "choke damp," because it causes suffocation by closure of the windpipe, the result of a spasmodic action, or involuntary effort of nature, to resist the entrance of that which would prove injurious. The gas may be sufficiently diluted with air to be admitted into the lungs, and yet prove not the less poisonous; this is the case with the fumes from a stove in which charcoal is burned, the person inhaling it falls into a stupor; and the respiration, which is for a time laboured, ere long ceases altogether. Before death, there may probably be convulsions and frothing at the mouth—the countenance becomes pale and livid, and the muscular fibres of the body are relaxed; so that there is no rigidity, nor constraint, in the position assumed. The first thing to be done on the discovery of such an accident is to dash

buckets of cold water, into the place, and over the person of the apparent sleeper. If newly-slacked lime can readily be procured, let this be mixed with the water, or scattered around the body in a dry state. Lighted bundles of some combustible material should be introduced, to cause currents of air, and so dispel the noxious vapours. Not until the unextinguished flame of a candle betokens that the proportion of oxygen is in some degree restored, should any one venture in to attempt a rescue; and then it should be with a cloth over the mouth, saturated with Lime-water, or a solution of Caustic Potash; or, if these cannot be procured, simple Water will be some protection. Get the body into the fresh air as soon as possible—dash water freely over it; then use friction with coarse towels or flesh brushes; apply hot flannels or bran-bags to the surface of the skin, and stimulating liniments to the chest and spine; glysters of warm gruel, containing each about a drachm of Spirits of Turpentine, should also be thrown up, and strong Liquor of Ammonia held to the nostrils, while efforts should be made to bring the lungs into play, by alternately compressing and relaxing the chest, and forcing breath into the mouth, or up the nostrils. If these measures are effectual, and the patient shows symptoms of a return to life and consciousness, let him be placed in warm blankets before a fire, and as soon as he can swallow, administer a tablespoonful of brandy, repeating it every half-hour until it is no longer necessary.

It sometimes happens that fluids taken into the stomach in a state of fermentation, generate Carbonic Acid Gas in such quantities that it passes into the lungs and causes, or threatens, suffocation. In this case, nothing is so effectual as Ammonia, which should be both inhaled and taken into the stomach. This gas is used to a considerable extent in medical practice; many mineral waters contain it naturally, and to its presence, Soda Water and other effervescent drinks owe their freshness and agreeable effect. In obstinate cases of vomiting, it is often given with a truly marvellous effect, acting both as a sedative and stimulant. See *Effervescing Drinks*.

CARBUNCLE (Latin *carbo*, a burning coal). The carbuncle differs from the boil, in having no central core, and in terminating in gangrene under the skin instead of supuration. Abernethy defines it as "an inflammation attacking a particular structure;" and Lawrence says that "it is essentially the same affection as the boil, only differing in magnitude and in its situation;"

this is usually the back of the neck, or the shoulders, in the interval between them, or the loins; a very common situation for it is immediately below the occiput, on the very top of the neck where the integument is thickest.

The *causes* of carbuncle are essentially similar to those of *boils* (which see); external irritation of some kind is generally the immediate cause; although there must also be a predisposition to carbuncular inflammation, arising from a particular state and condition of the system, generally an excess of fibrin, or inflammatory matter, in the blood.

The first *symptom* of the disease is pain, followed by a hard red swelling; very soon the surface of the tumour assumes a livid tint, and a soft spongy feel; small ulcers form on the skin, and, from their numerous orifices, which give the surface a sieve-like appearance, flows out a thin pasty discharge, which is characteristic of the disease. These openings quickly break into one, and then the discharge thickens as the dead cellular tissue begins to escape; to enable this to do so freely, an incision down to the very base of the tumour is made, and then crossed by another; the hæmorrhage attendant on this is commonly very considerable, as well as beneficial, in reducing the inflammation. Such is the mode of *treatment* usually adopted in carbuncle; warm bread or linseed-meal poultices are applied, both before and after the cutting; and, if the bleeding is excessive, Port Wine or decoction of Oak Bark, with a little spirit, may be used to moisten them. The poulticing should be changed about every eight hours, and continued until the morbid matter is all discharged, and the wound is nearly filled with healthy granulations; when these have risen to the level of the surrounding skin, the wound may be dressed with the ointment of Nitric Oxide of Mercury, or Red Precipitate ointment, as it is more commonly called. The constitutional treatment in this case should first be of an antiphlogistic kind; aperient, and febrifuge medicines, and low diet; but as soon as the carbuncle has been opened, and the discharge become copious, the patient's vigour must be sustained by good Beef-tea, Wine and other nourishing condiments. Sometimes there is great prostration of strength, and as much stimulant is required as in typhus fever; Bark, Opium, and Ammonia are commonly given to relieve the pain and arouse the nervous system. Persons of a full habit of body are those most subject to carbuncles, which are frequently fatal if they are

situated high up in the neck, because they are usually attended with inflammation of the membranes of the brain. When on the back or loins, although frequently of enormous size, they are not so dangerous. Sir Astley Cooper has remarked, that he never saw a patient who recovered from carbuncle on the head; in such cases, there being always effusions between the *tunica arachnoides* and *pia mater* (see *Anthrax*).

CARBURETTED HYDROGEN GAS. This is the gas which is commonly used for illuminating purposes; it is a combination of *carbon* and *hydrogen* (which see), and is highly combustible and explosive; it is the "fire-damp" of the mines, to guard against which Davy planned his safety lamp. Lamentable accidents have resulted from a want of proper precaution in dealing with this useful but dangerous vapour; when inhaled in considerable quantities, it is as poisonous as the carbonic acid, and requires the same remedies. See *Gas*.

CARDAMUM. The *Elettaria Cardamomum*, a plant of the natural order *Zingiberaceæ*, produces seeds which are highly aromatic,



stimulant and carminative, without having such heating properties as many other spices; they are given with other stimulants,

bitter tonics, and purgatives. Dose of the Powdered seeds from 5 to 20 grains; Tincture from 1 to 2 drachms. The small black seeds, which are enclosed in a whitish husk, are sometimes mixed with grains of Paradise, which are more biting and pungent, but less aromatic in their flavour. The plant which produces them is sometimes called *Matonia*, after Dr. Maton, who first used it medicinally in this country.

CARDIA (Greek *kardia*, the heart). The entrance into the stomach is so termed by anatomists, because it lies near the heart (which see). From the same root, come also the words, *Cardiacs*, cordial medicines; *Cardialgia*, pain in the stomach (see *Heartburn*), which has also been called *Cardiaca passio*; and *Carditis*, inflammation of the heart.

CAREX ARENARIA. A species of rush,



sometimes called the German *Sarsaparilla* (which see).

CARIES (Greek *keiro*, to abrade). Ulceration of the *Bones* (which see).

CARMINATIVES (Latin *carmen*, a song or charm). A class of remedies which allay pain and dispel flatulency in the stomach or bowels; this they effect by stimulating the muscular coat of these organs. The principal carminatives are Aniseeds, dose 10 grains to a drachm; Caraway seeds, 10 grains to a drachm; Cardamum seeds, 5 grains to a scruple; Coriander seeds, a scruple to a drachm; Cummin seeds, a scruple to a drachm;

Dill root and seeds, 10 grains to a drachm; Ginger root, a scruple to a drachm; Grains of Paradise, a scruple to a drachm; Lemon peel, Infusion of, $\frac{1}{2}$ an ounce to 2 ounces; Mastic, 10 to 30 grains; Orange peel, a scruple to a drachm; Peppermint and Spearmint waters, *ad libitum*; Oils of the same, 2 to 4 drops; Powder of Cinnamon, simple and compound, 5 to 20 grains.

CARICA PAPAYA. The Papaw Tree, of South America, which shoots up a small trunk from 12 to 20 feet high, and abounds



in a milky juice, which is used as a cosmetic and vermifuge. The fruit is eaten ripe, and when unripe is boiled as a vegetable; and the leaves are used as a substitute for soap in washing.

CARO (Latin *carnis* flesh). Hence we have *Carneæ columnæ*, the fleshy columns, or muscular fasciculi, within the cavities of the heart; hence also *Carnivora* and *Carnosa*, flesh eating, and fleshy animals; the latter term being applied to a class of the sea *Polypi*.

CAROTID (Greek *karoo* to induce sleep). A name given to a large artery, under the impression that tying it would induce coma. This is one of the main arteries of the system, it passes up the neck where it is called the Common Carotid; then, opposite the angle of the jaw, it divides into two branches, called the External Carotid and Internal Carotid, the former supplying the face, jaws, &c., and the latter the brain and eyes. (See *Arteries*). Increase of pulsation in the carotid is a symptom of chronic determination of blood to the head, of acute

inflammation of the brain, of delirium tremens, or of strong febrile action in the system: being near the surface this is one of the arteries most liable to accidents; when the throat is cut by a determined suicide, or a murderer, this is generally severed, and there is little hope of life left when it is so. See *Aneurism, Arteriomoty*.

CARPUS (Greek *karpō* the wrist), which see.

CARAWAY SEEDS (Latin *Carui Semina*). The produce of the *Carum Carui*; natural order *Umbelliferae*; stimulant and carminative, used chiefly in flatulent disorders of children, and with purgatives to prevent



cramping; the Oil contains the active principle and is chiefly used, dose from 2 to 8 drops rubbed down with sugar and mixed with water. In this way the Caraway Water of the shops is usually prepared, and sometimes by distillation from the seeds; the dose of this is from $\frac{1}{2}$ an ounce to 2 or 3 ounces; of the spirit from 1 to 2 drachms. For children, the water is much to be preferred

CARRAGEEN MOSS (sometimes called Irish or Pearl Moss). Is a sea-weed whose scientific name is *Chondrus*, or *Fucus crispus*; it yields, on boiling, a vegetable jelly, which is nutritive and demulcent, and may be recommended for consumptive persons and those troubled with catarrh. Sweetened and flavoured with Lemons, or Spice, it makes an agreeable article of diet. It is given medicinally in pulmonary and catarrhal diseases, as above indicated; and also in hæmoptysis, irritations of the bladder and kidneys, diarrhoea, and dysentery. It may be prepared thus:—One ounce of the Moss, previously soaked for a quarter of an hour in cold water, to be boiled in a pint and a-half of water until dissolved; then strained and flavoured: it should be given fresh. For dietary purposes, it is sometimes boiled in milk.

CARRARA WATER, very useful in some cases of Dyspepsia; is an artificially-prepared effervescing drink, holding Carbonate of Lime in solution, by means of an excess of Carbonic Acid.

CARRON WATER. Was so called because it was first employed at the Carron Iron Works, Scotland; is a mixture of Linseed Oil and Lime-water, in equal proportions. It has long been a popular application for Burns (which see).

CARROT. Several varieties of this well-known root are cultivated in this country;



containing a considerable portion of sac-

charine matter, they are somewhat indigestible, and are unfit for weak stomachs. To make them at all wholesome, they should be well boiled. Of the Wild Carrot (*Doreus sylvestris*), a common wayside plant, the seed was formerly used as a diuretic and aromatic, but it is seldom so now. The fresh root of either, wild or cultivated, when scraped, forms a good poultice for foul, ill-conditioned Ulcers.

CARTILAGE (Latin *cartilago*). A smooth and solid body softer than bone, but harder than a ligament, commonly called *gristle*. The cartilages of the human frame are distinguished generally as—1st. *Articular*, which cover the surface of the bones in the moveable joints; 2nd. *Inter-articular*, which occur between the ends of bones, as that which covers each condyle of the jaw; 3rd. *Connecting*, which connect the articular surfaces of bones, as the true ribs to the sternum, the bones of the skull, &c.; 4th, of *Cavities*, such as form the larynx, trachea, part of the nose, &c. There are also particular distinctions which have regard to shape, such as *Arytænoid*, *Cricoid*, *Thyroid*, *Xyphoid*, like an ewer, a ring, a shield, a sword.

CARUNCLE (Latin *caro*, flesh). A little piece of flesh; hence the terms *C. lacrymalis*, (Latin *lacryma*, a tear), the small red substance situated on the inner angle of the eye; and *C. myrtiformis* (Latin *myrtus*, a myrtle); the remains of the lacerated *hymen* (which see).

CARUS (Greek *kara*, the head). Profound sleep, *Lethargy*, (which see).

CASEIC ACID (Latin *caseus*, cheese). A substance extracted from cheese; its salts are called *Cascates*; and the curd of milk, made by means of rennet, which is the basis of cheese in a state of purity, is called *Caseus matter*.

CASCARILLA. The bark of the *Oroton eleuteria*, of the natural order *Euphorbiaceæ*, commonly prescribed as an aromatic bitter tonic in dyspepsia, dysentery, flatulent colic, and general debility. The Infusion is a good vehicle for several preparations of Iron, Bismuth, and other metallic tonics: the dose is from 1 to 2 ounces; that of the Powder from 20 to 30 grains; of the Tincture from 1 to 3 drachms; of the Mixture (*Mistura Cascarillæ Comp.*) from 1 to 1½ ounces; the latter formula is a good medicine for chronic affections of the mucous membrane of the lungs. Abernethy recommends the following Mixture, a wine-glass full an hour or two before, and two hours after dinner, to dyspeptic persons:—Infusion of Cascarilla, 7 ounces; Bicarbo-

nate of Soda, 3 drachms; Tincture of Cardamoms, 6 drachms; if more stimu-



lant is required, add Tincture of Ginger, 4 drachms.

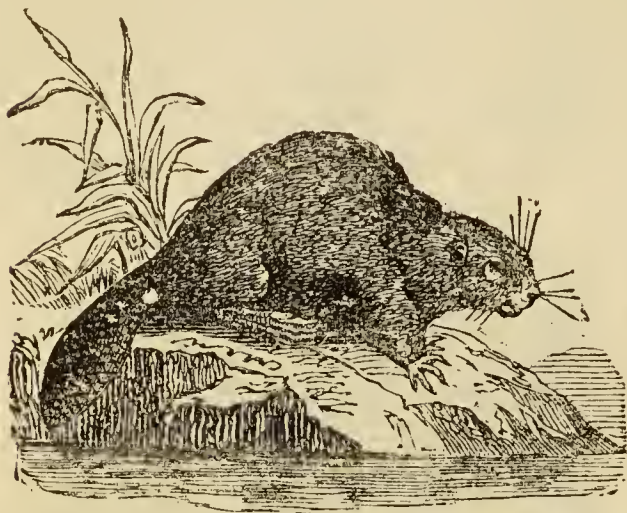
CASSAVA. A starch-like substance, obtained from the root of the *Iatropha manihot*, belonging to the natural order *Euphorbiaceæ*; for uses and qualities of this substance see *Tapioca*.

CASSIA. This is the generic name of several plants used medicinally, and belonging to the natural order *Leguminosæ*, such as *Cassia Lanceolata*, *Marilandica*, and *Obovata*, the Indian, American, and Aleppo *Senna* (which see); also *C. Fistula*, or Purging Cassia, the insides of whose pod yields a soft black pulp, used as a laxative, and said to form the basis of the so-called Essence of Coffee. But that to which the name is most commonly applied is the *Cassia Cinnamomum*, whose bark, possessing the same properties, is used for the same purposes as *Cinnamon* (which see).

CASTILE SOAP (Latin *Saponis Castile*). This is generally esteemed one of the finest kinds of soap, and is therefore used medicinally, for making pills, plasters, &c.; for cleansing diseased skin, washing sore heads, &c.; it is composed of Soda and Olive Oil, and may be had either white or

mottled, the former being preferable. See *Soap*.

CASTOR (Greek *gastor*, a big-bellied animal). This is an oily substance secreted by the beaver (*Castor fiber*) in a bag near the rectum; it is a nervous stimulant, antispasmodic and emmenagogue, and is useful in several nervous affections, especially



when connected with uterine irregularity; we obtain it from both America and Russia, but that from the latter country is much the best. Dose of the Powder from 10 to 20 grains; of the Tincture from 1 to 2 drachms. Chemists have extracted its active principle, which they have called *Castorine*, but it has not come much into use.

CASTOR OIL (Latin *Oleum ricini*). This well known purgative is expressed from the seeds of the *Ricinus Communis*, or *Palma Christi*, a plant of the natural order *Euphorbiaceæ*, found in the East and West Indies. One peculiarity of the Oil is that it dissolves in its own volume of alcohol; it is the mildest, safest, and most certain cathartic known, seldom griping, or causing flatulency; it may therefore be administered in irritable conditions of the system to persons suffering from debility, and young children; after childbirth, in operations for lithotomy, in peritonitis, dysentery, and where there is inflammatory disease of the urinary organs. With most purgatives, the immediate effect is followed by a constipating tendency; it is not so with Castor Oil, the dose of which, after repetition, may be generally decreased; the usual quantity required, is for children from 1 to 2 drachms; for adults from 1 to 1½ ounces: the best vehicles for its exhibition are Tea, Coffee, Gruel, Barley water, Spirits and water, or Peppermint or some other aromatic water; those, to whom its oily flavour is especially nauseous, will do well to chew a piece of

fresh orange or lemon peel just previously to taking it: this renders less acute the nerves of taste. It is sometimes made into an Emulsion as follows:—Put into a clean mortar the yolk of an egg, add to this 6 drachms of Castor Oil, and well mix by trituration; then add gradually, to the extent of 6 ounces, Cinnamon, or some other aromatic water. The mixture has the ap-



pearance of rich cream or custard; the dose is about an ounce, that is, two table-spoonsful. Exceptional cases sometimes occur of stomachs that will not retain the oil, disguise it how you may; and on some it acts like a drastic purgative, causing intolerable pain, or a deadly faintness during its operation; such persons should avoid taking it.

The term Cold Drawn Castor Oil, which commonly appears on the druggists' labels, refers to the mode of expressing it from the seeds between cold, instead of hot plates, as it was formerly prepared; drawn in this way, the oil is clearer, purer, and less likely to become rancid by keeping. If good, it is without smell and almost colourless; although thick, so that it flows from the bottle slowly, yet it is lighter than any watery vehicle, on which it will float in a body, and so go easily down the throat at a gulp; when it has become of a light brown, or dark yellow colour, and has a hot nauseous taste, it is rancid, or badly prepared, and is unfit to take.

CASTRATION (Latin *castro*, to emasculate). The operation of removing the *Testes* (which see).

CATALEPSY (Greek *kata* or *kath* against, down, or into, and *lambano* to seize). A spasmodic seizure, which causes a rigidity of the limbs, retaining them in a certain position, however inconvenient or painful.

The *causes* of this disease are seldom local, but such as affect the whole system; catamenia, worms, and painful emotions of the mind, or impaired digestion, may be mentioned as among the most frequent: women are more subject to these attacks than men; and, sometimes, they result in apoplexy, epilepsy, or melancholia. The *symptoms* are a sudden deprivation of all power of motion and sensation; the patient remaining in precisely the same position as he was when seized: the attack comes on suddenly, without any warning, except, it may, be a slight languor of body and mind, and lasts for several minutes, or perhaps hours, although the longer period is rare; if, during the fit the position of the limbs is altered, they will remain as placed, and when the paroxysm is over, there will generally be no consciousness of what has transpired while it lasted; in this respect it resembles the mesmeric sleep, or the state of insensibility produced by the inhalation of ether or chloroform.

The *treatment* must depend upon the probable cause; if the patient is of a plethoric habit, cupping at the back of the neck, blisters, a seton or a issue, with the administration of cathartics; if debilitated, tonics and antispasmodics must be given. During the attack apply mustard cataplasms to the palms of the hands, and soles of the feet, pit of the stomach and spine; cold water may dashed in the face, if the fit continue long, and strong Ammonia applied to the nostrils; a mixture of Ether, Fœtid Spirits of Ammonia, and Tincture of Musk, 2 drachms of each to 8 ounces of Peppermint Water, should be administered in ounce doses every quarter of an hour, or so. On recovery, the system should be strengthened as much as possible with good diet, gentle exercise, sea bathing, or the cold shower bath; Chalybeate waters may also be drunk with advantage, or preparations of Steel, bitter infusion, or Cascarella with Aromatic Spirits of Ammonia.

CATAMENIA (Greek *kata* as above, and *men* a month). The monthly uterine discharge in females. See *Amenorrhœa*, *Menstruation*.

CATAPLASM (Greek *kata*, and *plasso* to spread). See *Poultice*.

CATARACT (Greek *kata*, and *arasso* to confound). A disease of the eyes causing opacity of the crystalline lens which prevents the passage of the rays of light, and so produces blindness.

The real *cause* of this disease does not appear to be well understood; it may proceed from external violence; but more commonly it has some internal and occult origin; it is of slow growth, and can only be operated on at a certain stage, when the opaque body in the pupil has assumed a sufficient density.

The *symptoms* of its formation are, a dimness and mistiness of vision, which may generally be noticed before any opacity can be perceived on the lens itself; then there are optical illusions, like specks or motes floating before the eye; this is succeeded by the gradual falling, as it were, of a curtain upon the outward view, which is finally obscured altogether. Sometimes the progress of the disease is slow and gradual, but frequently it is rapid, especially in the latter stages; persons who have passed the middle age are most likely to be affected by it, and sometimes it has made considerable progress in one eye before the patient is made aware of it by some accidental circumstance, which for a time prevents the use of the other.

The proper *treatment* is depletion, where it can be borne; cupping in the neck, blisters, or a seton; repeated doses of Calomel, with purgatives; poultices of fresh Hemlock leaves constantly applied to the eye, or the extract of Hemlock smeared around it, or a solution of the same dropped in. All remedies, however, generally fail, and the crystalline humour must be depressed or extracted; of course only a surgeon can attempt this operation; it is generally successful for a time, but very often the disease renews the attack after awhile. A Cataract may be either *firm* or *hard*, *milky* or *fluid*, *caseous* or *soft*; in the first case the opaque lens retains a tolerable degree of firmness; in the second the substance is converted into a whitish kind of fluid; and in the third, it has a jelly or curd-like consistence.

Cataract is distinguished from *gutta serena* by the presence of sensibility to light, and the obvious opacity in the crystalline lens, neither of which are symptoms of the latter disease; in which, as well as in *hypopyum*, *staphyloma*, and other diseases of the eye there is generally pain at the commencement. See *Eye*.

CATARRH (Greek *kata*, and *reo* to flow). Inflammation of the mucus membrane of the

nostrils, or bronchial passages, causing an increased afflux of the matter secreted therein. There are two distinct kinds of this disease, viz., *Catarrhus a frigore*, cold in the head; and *C. a contagia*, epidemic catarrh, commonly called *Influenza* (which see).

The *causes* are exposure to cold or wet, epidemic poison, which, as the result of over stimulus to the nerves, produces congestion of some portion of the mucus membrane, and generally, more or less, of inflammatory fever in the whole system.

The *symptoms* are a dull, heavy pain in the forehead, redness of the eyes, fulness and heat of the nostrils, followed by the distillation of a thin acrid fluid from those parts; hoarseness, frequent sneezing, and soreness of the trachea; difficulty of breathing, cough, and loss of appetite, with a sense of chilliness, and a general feeling of lassitude: the pulse, towards evening, becomes considerably accelerated, and more or less of fever ensues as the disease proceeds; the mucus, at first, thin, colourless, and expectorated with difficulty, gradually becomes thicker, of a yellow colour, and more easily brought up; after a few days it diminishes in quantity, and soon ceases altogether, if proper care be taken, and the right remedies used; and this brings us to

The *treatment*, which will be low diet, plenty of diluents, such as Barley Water or thin Gruel, acidulated with a little Lemon Juice, or Cream of Tartar; if there is much difficulty of breathing, and much inflammation, bleeding, general or topical, must be resorted to, with diaphoretic and aperient medicines, and Calomel in 3 grain doses; a blister to the chest if the desired relief is not afforded by these means, and the promotion of perspiration by Dover's Powder, 10 grains, at bed-time; the use of the foot-bath, warm drinks, and plenty of clothes on the bed; an infusion of Linseed and Liquorice Root may be given where the cough is very troublesome, and the chest sore; and if the rest is much disturbed, a draught containing $\frac{1}{4}$ th of a grain of Morphine, 2 drachms of Liquor of Acetate of Ammonia, and $\frac{1}{2}$ a drachm of Ipecacuanha Wine, with an ounce of Camphor Mixture, should be administered at bed-time instead of the Dover's Powder. Catarrh in children may be distinguished from measles by the mildness of the febrile symptoms in the former, and the absence of many characteristic marks of the latter. The disease is seldom attended with fatal consequences, except in elderly persons, or those far advanced in pulmonary complaints, and greatly debilitated con-

stitutions; it often proves the first stage of bronchitis, and commonly causes great constitutional derangement, and renders the system liable to the attacks of other diseases. Sometimes after it has continued on a person for a longer period than usual, the inflammation of the mucous membrane affects that of the *bladder* (which see).

CATECHU. Is a substance procured from the wood of the *Acacia Catechu*, a plant of the natural order *Leguminosæ*; it has tonic and astringent properties, which render it valuable in diarrhoea, chronic dysentery, and passive hæmorrhages, especially those of the bowels or uterus; also in leucorrhæa, gleet, chronic catarrh, and all cases of increased mucous discharge without inflammation. In the composition of astringent gargles, and lotions for ulcered sore throat, ulceration of the mouth, chapped nipples, &c., it is employed with advantage: for the last named purpose the Tincture is generally used; of this the dose is from $\frac{1}{2}$ a drachm to 2 drachms; of the Infusion, from 1 to 2 ounces; of the Powder from 10 to 30 grains; of the Electuary from 1 to 6 scruples. There is also a Catechu Lozenge, of which one may be taken several times a day for hoarseness; and a compound Powder, the dose of which is from $\frac{1}{2}$ to $1\frac{1}{2}$ drachms: mixed with Bark and Myrrh it makes a good *dentrifice*, (which see.) Catechu was formerly called *Terra Japonica*, or Japan Earth; it was then supposed to be a mineral instead of a vegetable production: the best kind is of a pale chocolate colour; it should be free from sticks and other impurities.

CATHARTICS (Greek *kathaizo*, to purge). These may be either *laxative*, *purgative*, or *drastic*, according to their power of accelerating, or increasing the evacuations from the bowels; we append a list of those most used, with their doses:—Aloes, from 5 to 15 grains; Buckthorn Berries, 1 to 2 drachms; Broom Tops, from 2 to 6 grains; Colocynth Powder, same dose; Elaterium (or Wild Cucumber), $\frac{1}{2}$ to 3 grains; Gamboge, 5 to 20 grains; Hedge Hyssop, from 10 to 30 grains; Jalap, 10 to 25 grains; Scammony, same dose; Staves-acre, from 3 to 10 grains; Tobacco, $\frac{1}{2}$ to 5 grains; Submuriate of Mercury (Calomel), 1 to 12 grains; Pulp of Cassia, 2 to 8 drachms; Castor Oil, $\frac{1}{2}$ to 1 ounce; Rhubarb, 10 to 20 grains; Senna, 20 to 30 grains; Extract of Dandelion, 10 to 60 grains; Carbonate of Magnesia, $\frac{1}{2}$ to 2 drachms; Sulphate of Magnesia (Epsom Salts), $\frac{1}{2}$ to 2 ounces; Muriate of Soda (Common Salt), 10 to 6 grains; Tartrate of Potash, 2 to 8 drachms; Super-Tartrate (Cream of Tartar), 1 to 3 drachms; Sul-

phate, 1 to 2 drachms; Super-Sulphate (Polychrest Salt), 1 to 6 scruples; Potassio-Tartrate of Soda (Rochdale Salt), 1 to 4 drachms; Castile Soap, 1 to 2 drachms; Sea Water, $\frac{1}{2}$ pint; Cheltenham, Epsom, Scarborough, and other waters (which see); also Official preparations, such as Decoctions, Infusions, Pills, Powders, Tinctures, &c., of the above.

CATHARTINE. This is an alkaloid, discovered in the pods and leaves of Senna, of which it is the active principle; it has not been yet much used medicinally (see *Senna*).

CATHETER (*kathaito*, to thrust into). A tube which is introduced through the urethra into the bladder, in cases of stricture of the passage, when it is desirable to draw off the urine. The introduction of this instrument, which is best made of silver, always requires great care, and should not be attempted by one unacquainted with the anatomy of the parts, until he has been well instructed by his professional adviser; with some the passing of the Catheter becomes necessary at regular intervals, and it would be both expensive and inconvenient to have a medical man always to do it; after a while, too, it becomes easy for the patient to perform the operation himself. Catheters are of various kinds, both as regards make and material; some are of elastic gum—some of metal; they are thick or thin, according as the passage is more or less constricted—longer or shorter as required for male or female use; hence only a surgeon can judge of the right size or make. In some cases it is necessary to wear a Catheter continually; for such a purpose perhaps the elastic gum, lined with flexible metal, and provided with a stop-cock is best. See *Bougie*, *Stricture*.

CATHOLOCON (Greek *kath* and *olos*, universal). A medicine good for any disease. See *Panacea*.

CATLING. A sharp-pointed, double-edged knife, used chiefly in amputations of the fore arm and leg, for dividing the interosseous ligaments. See *Amputation*, *Knife*.

CATOCHUS (Greek *katecho*, to detain). A muscular rigidity which detains the body in an erect position. See *Catalepsy*.

CAT'S PURR. An unnatural sound of the Heart (which see), and *Auscultation*.

CAUDA EQUINA (Latin for horse's tail). The final division of the spinal marrow; so called from the disposition of the nerves which issue from it. See *Hippuris*.

CAUL. It sometimes happens, in childbirth, that a portion of the uterine membrane, covering the head of the infant like a cap, comes away with it, and this is termed

the Caul; by ignorant and superstitious people it was, and still sometimes is, religiously preserved, and many occult virtues were attributed to it. This is also another name for the *Omentum* (which see).

CAUSTIC (Greek *kaio* or *kausō*, to burn). A substance which destroys parts by chemical decomposition; from the same root, we have *Cautery*, the application of caustics, those most commonly employed being Lunar Caustic, or Nitrate of Silver (which see), and *Argentum*; Caustic Potash, the old name of which is *Lapis infernalis* (see *Potash*); and that which is called the Actual Cautery, viz., the application of iron at a red or white heat, or of some lighted inflammable substance to the part. Antimony, Arsenic, Copper, Lime, and the Mineral Acids are also sometimes employed for this purpose (see *Escharotics*).

A new form of actual cautery has recently been introduced by M. Bonnafonde, a French surgeon, it is thus prepared:—Dissolve 5 parts of Gum Tragacanth in a sufficiency of water, facilitating the solution by adding a little sugar, and rendering it as concentrated as possible. Then add gradually 15 parts of Vegetable Charcoal, and 2 of Nitrate of Potash, and thus form a homogenous paste capable of being rolled into cylinders of various sizes. These must be well dried, and when wanted for use may be lighted either by the candle or the fire. This preparation burns slowly, and is well adapted for the purpose where Cauterisation is not required to act very deeply, or to be made on a very wet surface. A mixture of the Gum and Charcoal without the Potash has been found to answer.

CAVERNOUS (Latin *cavus*, hollow). The name of a ganglion on the head, and of two sinuses of the sphenoid bone.

CAVITARIA (Latin *cavitus*, a cavity). Worms found in the cavities of the intestines. See *Worms*.

CAYENNE PEPPER. A mixture of the dried pods of several species of *Capsicum*, (which see) also *Pepper*.

CEDRON. The seeds of the *Simaba Cedrus*, of the natural order *Simarabaceæ*, have obtained some celebrity as a remedy for hydrophobia and the bites of serpents; they are likewise given in intermittent fevers, cholic, spasmodic, and dyspeptic affections, and cholera. The ordinary dose is from 1 to 2 grains (in 20 or 30 grain doses it is poisonous); as an antidote for serpent bites, 5 grains in a tablespoonful of Brandy may be given at the time.

CELERY. Under this generic name are included several species of umbelliferous

plants, both wild and cultivated; one of these is the *Apina Graveolus*, common in this country, the seeds of which are used as a diuretic in gravel: another species of wild Celery is the *Ananthe Crocata*, the root of which is poisonous, as was unfortunately experienced by a boat's crew of Her Majesty's ship Wellington, in the year 1837,



who went on shore at Campbelltown, and finding the plant growing profusely, ate of the root; the result was the death of five out of fourteen. The symptoms of poisoning were livid countenance, stertorous breathing, eyes fixed, with pupils dilated, insensibility and rigidity, intense movement of the dorsal and lumbar muscles, feeble pulsation, action of the heart scarcely perceptible, lower jaw firmly locked. In five of the cases, the spasmodic accessions were severe and frequent; in one the most prominent symptom was extreme restlessness, approaching to mania; in almost all, semi-delirium and jactation, if not convulsions; and in one or two, great prostration, requiring brandy and ammonia. In all the cases in which there were convulsions, opisthotonos was the form assumed.

Of the garden Celery, the best for salad is the Turkish: and for stewing, the Celerine, or turnip-rooted sorts; the seeds will do as well for flavouring soups, as the stems or leaves: a useful preparation for this purpose may be made by steeping one ounce of the bruised seeds in a quarter of a pint of Brandy

or other spirit; a few drops will suffice to flavour a pint of soup or broth.

CELESTRINE. A name given to the Sulphate of *Strontia* (which see).

CELLULA. Latin for a little cell or cavity, like those of the hyatoid membranes; from the same root comes *cellular*. The structure of the mastoid process of the lungs is so designated; and *cellular membrane* or *tissue* is the term applied to the filmy meshes which connect the minute component parts of most of the structures of the body. See *Membrane*, *Tissue*.

CENTRUM (Greek, *centro*, to prick). The middle point of any body or organ; hence *C. ovale* the appearance presented when the brain is cut horizontally on the level of the *corpus callosum*; *C. tendinosum*, the tendinous centre of the *diaphragm* (which see).

CEPHALICS (Greek *cephale*, the head). Remedies adopted for the cure of disorders in the head; they are commonly those which produce a discharge from the mucous membrane, such as the various *Snuffs* (which see); *Asarum Asarabacca*, *White Hellebore* (which see). Among the fluids are *Spirits of Ammonia*, *Rosemary*, and *Lavender*, strong *Acetic Acid*, *Hartshorn*, &c. From the same root, as the above, we have also *Cephalagia*, *Cephalæa*, *Cephalodyne*, pains in the head; *Cephalic Vein*, the anterior vein in the arm, so called because it was formerly the one commonly opened to relieve the head; *Cephalonia*, a kind of tumour, being a morbid product resembling brain in appearance; *Cephalogenesis*, the doctrine of the formation of the *brain* (which see).

CERA (Latin for wax). Is the product of the *Apis Mellifera*, or Honey Bee, and of some plants, such as the *Myrica Conifera*. *C. alba* and *C. flava*, White and Yellow Wax, are the bleached and unbleached, both of which kinds are used medicinally (see *Wax*); of which substance *Cerine* and *Myrcorine* are the two principles, being respectively analagous to the *claine* and *stearine* of oils and fats; *Ceric Acid* is produced by the action of the alkalies on wax.

CERAMEN (Latin *cera*, wax). The waxy secretion of the ear which is furnished by the ceraminous glands. See *Ear*.

CERASINE. An alkaloid contained in the gum which exudes from the bark of the Cherry Tree (*Prunus Cerasus*), belonging to the natural order *Myrtaceæ*.

CERUSSA. One of the Latin names for *Lead* (which see), hence we have *Cerussa Acetata*, Acetate or Super-Acetate of Lead, more commonly called Sugar of Lead.

CERATE (Latin *ceratum*, from *cera*, wax),

A composition partly of wax, partaking of the nature of ointment, being of a consistence intermediate between that and plaister. The cerates of the London, Edinburgh, and Dublin Pharmacopœias are as follows:—*Ceratum*, composed of Olive Oil and Bees' Wax alone; *C. Calamine*, the above ingredients, with prepared Calamine, well known as *Turner's Cerate*, a good dressing for wounds and ulcers; *C. Cantharidis*, a blistering application; *C. Cetacei*, composed of Spermaceti, Wax, and Oil, used to heal blisters, cuts, &c.; *C. Hydrargyri Compositum*, composed of Mercury, Soap, Cerate, and Camphor, stimulant and antisyphilitic; *C. Plumbi Acetas*, in which Acetate of Lead is the active agent; *C. Plumbi Compositum*, Diacetate of Lead, with Camphor, Wax, and Oil; *C. Resinæ*, containing about a third of Resin, same as Yellow Basilicon; *C. Sabine*, containing Powdered Savine, stimulant and irritant, used chiefly to keep blisters open; *C. Saponis, Comp.* Soap, with Oxide of Lead and Vinegar; *C. Simplex*, much the same as *Cetacei*.

CERATO-GLOSSUS (Greek *kerus*, a horn, and *glossa*, the tongue). A bone running from one of the bones of the os hyoides to the tongue (which see).

CEREBRUM and CEREBELLUM. The brain and little brain; the former being the chief portion, occupying the whole upper cavity of the skull; and the latter, the hinder and lower part of the *Encephalon* (which see), and *Brain*, the nerves and arteries of which are termed *cerebral*, while *cerebritis* is a term sometimes applied to inflammation of the brain.

CERVIX. The hinder part of the neck, of which the fore part is called *Collum* (which see). The above term is also applied to the neck of the bladder (which see); and the nerves, arteries, vertebræ, &c. of neck are termed *cervical*.

CETACEUM (Latin *ceta*, a whale). A substance obtained from the *Physeter Macrocephalus*, or Sperm Whale (see *Spermaceti*), from which is obtained, by boiling in alcohol, a substance called *Cetine*.

CETRARIA or CETRARINA. Iceland Liverwort or Moss. See *Carrageen Moss*.

CHALAZIUM (Greek *chalaza*, a hailstone). A small tubercle on the eyelid supposed to resemble a hailstone. See *Eye*.

CHALK (Latin *Creta*). A common species of calcareous earth, properly Carbonate of Lime; with the coarser particles removed by washing, it is much used in medicine, under the name of Prepared Chalk (*Creta Preparata*); being anti-acid and absorbent it is very useful in acidity of the stomach,

and in diarrhœa, after the irritating matters have been removed by copious evacuations. On account of its absorbent properties, it is also a good application to ulcers discharging a thin ichorous fluid. (See *Ulcers*). The dose of Prepared Chalk is from 10 to 40 grains, or more; it enters into the composition of the following officinal preparations:—Compound Powder of Chalk (in which it is combined with aromatics), dose 1 to 3 scruples; the same with Opium, 1 to 2 scruples; Quicksilver with Chalk (Mercurial or Grey Powder), 5 to 10 grains; Chalk mixture, 1 to 3 ounces; Aromatic Confection, 10 to 60 grains; Chalk Lozenges *ad libitum*.

Chalk is held in solution by excess of Carbonic Acid, as in *Carrara Water* (which see). In this form it is anti-acid and astringent. Prepared Oyster Shells (*Tæsta Preparata*), and Precipitated Carbonate of Lime (*Calcis Carbonatus Precipitatum*) have the same medical properties as Chalk. See *Lime*.

CHALK STONES. Gouty concretions found in the joints, consisting of Urate of Soda and Phosphate of Lime. See *Gout*.

CHAMPAGNE. A well known light French wine, often accused of causing gout and indigestion, which, however, are more likely to arise from the other table luxuries taken by champagne drinkers, who, on account of its high price, must necessarily be of the upper classes. This wine contains about 12 per cent. of alcohol, a much smaller proportion than that of Port, Sherry, Madeira, and other strong dry wines; it has, however, a powerful intoxicating effect on account of its effervescence. See *Wines*.

CHALYBEATE (from *Chalybes*, a people who dug iron out of the earth). A term applied to springs impregnated with iron and other minerals. (See *Mineral Waters*). Sometimes, also, to medical preparations which contain Iron, as *Vinum Ferri* (Wine of Iron). *Chalybes rubigo* is an old name for the Sub-carbonate of Iron (which see).

CHANCRE (Greek *kankinos*, a cancer). A sore which arises from the direct application of the syphilitic poison. Chancres commence with small pustules, usually on the penis in men, and the labia in women; after breaking, they degenerate into yellowish or greyish coloured sores with a firm basis. The proper treatment is destruction of the infected tissues by means of Nitrate of Silver; a free application of which is requisite, either in the form of a strong solution, say about a drachm to an ounce of Distilled Water, brushed over the surface,

or used to saturate a piece of lint, or else applied in the solid form; in either case, poulticing with Linseed Meal is necessary. See *Syphilis*.

CHARCOAL. The residue of burnt animal, vegetable, and mineral substances. Several kinds of Charcoal are employed medicinally, such as—1st. Burnt Sponge (*Spongia usti*), which is Carbon mixed with Phosphate and Carbonate of Lime, and Sub-carbonate of Soda; 2nd. Burnt Seaweed, sometimes called Vegetable *Æthiops*, or *Pulvis Quercus Marina*, which is procured from the Bladder Wrack, a common seaweed, the *Fucus Vesiculosus* of botanists; 3rd. Wood Soot (*Fuligo Ligni*), collected from chimneys under which wood is burnt: there are others, such as Ivory and Lamp Black, which are used in the useful and ornamental arts. But it is with the Charcoal of burnt wood (*Carbo Ligni*), that we have more especially to do at present; this is antiseptic and decolorant, it is used as an ingredient in tooth powder, and also in poultices for gangrenous wounds, in the proportion of about one part with one of Linseed Meal, and two of common Bread and Water poultice; it is also sometimes given internally for hæmorrhage, dose 10 to 20 grains. The animal Charcoal, which is obtained by burning Bullock's Blood or Bones, possesses much the same properties. See *Carbon*.

CHARPE (French) sometimes called *cad-dice*. The loose fibres from scraped lint, used to absorb the discharge from wounds. In France it is much used, but little in this country. See *Lint*.

CHEESE. This favourite article of diet, which while it may be taken with impunity, and even, perhaps, with advantage, by those of good digestive powers and active habits, sometimes acts like a poison on those who are bilious, dyspeptic, and sedentary. It is, as most persons know, the curd of milk, mixed with a proportion of butter: this curd, which is called by the scientific *caseine*, very closely resembles albumen in its composition, and its nutritive quality may be judged of by the fact enunciated by a great authority, that "from caseine alone, the chief constituents of the young animal's blood, as well as its muscular fibres, membranes, &c., are formed in the first stage of its life." Yet, for all this, cheese is anything but nutritious to most persons, because the caseine which it contains is presented to the stomach in an indigestible form. In new cheese is this especially the case; as it verges towards decay it loses its toughness, and the close coherency of its

particles: a small piece at the close of a full meal is thought to assist digestion; it probably may do so, in the same way as the whip or spur assists the race horse to reach the goal, by causing the stomach to put forth all its powers. Toasted cheese is decidedly more injurious than raw, and the stimulus of mustard and pepper may well be applied to enable the digestive organs to manage a Welsh rare-bit.

CHESTNUTS. The fruit of the *Castanea vulgaris* are perhaps somewhat less unwholesome than most nuts, as they contain much starch and no oil; roasted or boiled they are more digestible than raw, but they are never fit for weak stomachs, especially when converted into flour, in which state they are largely eaten on the Continent.

CHICKEN POX. This is a mild form of eruptive disease, which affects a person but once in a lifetime, and which can generally be traced to specific contagion or infection: it is mostly confined to children.

Symptoms. It is preceded, in most cases, but not in all, by slight fever, which lasts for one or two days before the eruption appears, which at first is in the form of conical pimples with a white head, mostly on the shoulders, breast, and neck, and more sparingly over the face and body generally. These vesicles, on the second day, appear like little globular blisters, but with little or no surrounding inflammation; they now become filled with a watery fluid which is not converted into pus, as in Small Pox, to the milder kind of which this disease bears some resemblance, and, about the fifth day, the bladders shrivel up and dry away, leaving only crusts or scales.

Treatment. On the first appearance of the eruptions, the patient should be put upon spare diet; this, and a dose or two of some cooling aperient is generally all that is necessary; but should the febrile symptoms run high, administer small doses of James's, or Antimonial Powder, with saline draughts and gentle laxatives; plenty of cool drinks, and, if the bowels are at all obstinate, emollient glysters. Care must be taken that the skin is not irritated by scratching; as if it is, painful and troublesome sores may be produced, and also that the patient does not take a chill. If these precautions are observed, little or no danger is to be apprehended from Chicken Pox; the main distinctions between which and Small Pox are the absence or extreme mildness of the premonitory fever in the former disease, and the form and contents of the vesicles; those of the latter eruption being filled with dark matter, and having, invariably, a depression

in the centre. What is commonly called *Swine Pox*, is but a species of Chicken Pox or *Varicella* (which see).

CHICORY. The root of the *Cicorium Intyblis*, a plant common enough in our fields and hedge-rows : is much used for the adulteration of Coffee ; so much so, indeed, that to the popular taste the beverage is disagreeable without it. This admixture is generally considered a very harmless one ; but the *Lancet* Sanatory Commissioners say that "infusion of Chicory alone, especially, and also when mixed with Coffee, in the proportion of 25 per cent., produces a sense of weight at the stomach, languor, and headache." It has, by an eminent Continental authority, been assigned as one of the exciting causes of amaurosis. Infusion of Chicory occasionally acts as an aperient, at



other times as a diuretic. In consequence of Chicory not containing an essential oil, it has not, when roasted, the fragrance of Coffee. Its infusion has a sweetish or mawkish taste, and is dark-coloured, thick, and glutinous. This root is in itself extensively adulterated with a great variety of substances, among which bullock's-liver and venetian-red may be named, as especially objectionable. Chicory-lovers, however, and those who cannot afford to drink pure Coffee, will, no doubt, continue to use it. See *Diet, Regimen*.

CHILBLAINS. An inflammatory affection

of the skin, generally confined to the extremities, and especially the fingers and toes. Exposure to sudden alternations of heat and cold usually give rise to these troublesome visitations, which are rather characterised by itching and irritation than pain. Persons of scrofulous habit and languid circulation, are most subject to them, as are children and aged persons. It is a popular fallacy, that to keep the surface of the skin in a state of unnatural warmth, by hot bottles and woollen socks by night, and fur linings and feet warmers by day, is the best way to prevent Chilblains ; but this only serves to keep up a constant perspiration, and so weakens the tone of the system, and increases the liability to them. A nightly foot-bath of cold, or for aged persons, of tepid salt and water, with plenty of friction with a rough towel, and exercise during the day, will be most likely to keep Chilblains from the feet ; and for the hands, a careful rubbing so as to get them thoroughly dry after every washing or dipping in water, and an avoidance of all unnecessary exposure to severe cold, are the best preventive measures. It is a good plan to have a pan of oatmeal always at hand, and to rub them well over with that after they have been wetted and wiped as dry as possible ; this will absorb any moisture left by the towel, and have a softening and cooling effect.

Should Chilblains come, as sometimes they will, in spite of all precautions, let them be gently rubbed every night and morning with some stimulant application, Alcohol, Brandy, Spirits of Turpentine, or Camphorated Spirits of Wine, are all good for this purpose ; but the application which we have found most efficacious is a lotion made of Alum and Sulphate of Zinc : 2 drachms of each to half a pint of water, rubbed in warm ; it may be made more stimulating by the addition of 1 ounce of Camphorated Spirits. When the Chilblains are broken there must be a different course of treatment ; the ulcers formed are often difficult to heal, especially in weakly and ill-conditioned persons ; there is generally a great deal of inflammation which must be subdued by means of bread and water poultices applied cold, and afterwards by cooling ointments, such as the Cerate of Acetate of Lead, or Spermaceti Ointment, with 40 drops of Extract of Goulard added to the ounce ; should there be a disposition to form proud flesh, the Ointment of Red Precipitate should be used.

CHIRAGRA (Greek *cheir* the hand, and *agra* seizure). Gout in the hand (which see), also *Arthritis*, *Podagra*, and *Cleisagra*.

CHIRURGERY (Greek *cheir*, and *ergin* work). That branch of the healing art which treats diseases and injuries to the body by application of the hand, or of instruments. See *Surgery*.

CHLORIDE OF CALCIUM (Latin *Calcii Chloridum*). Formerly called Muriate or Hydrochlorate of Lime, is deobstruent, alterative, and tonic, and is given in bronchocele, and scrofulous diseases. It is usually administered in solution as *Liquor Calcii Chloridi*, dose from 20 to 60 drops in milk, or some other fluid.

CHLORIDE OF LIME (Latin *Calx Chlorinata*). Commonly used as an antiseptic and deodorizer. See *Chlorine*, *Lime*.

CHLOROSIS (Greek *chloros*, green). The Green Sickness. See *Anæmia*, *Menses*.

CHLORINE (same root as above). A greenish coloured gas produced by the action of Muriatic Acid on Peroxide of Manganese; it was formerly called Oxy-Muriatic Acid; it is a simple incombustible body possessing a disagreeable odour and acid taste, having the property of destroying all colour in vegetable and animal substances, and is much employed in the process of bleaching, and also for the purpose of destroying the effluvia arising from contagious diseases. Its various chemical combinations need not be particularized in a work of this description, as they are interesting and useful only to the chemist and philosophical experimenter; some of them, however, we may mention, as coming within the scope of our present subject, being used as remedial agents, such are the *Chlorides of Lime and Mercury, Potash, Soda, Sulphur, Zinc, &c.*, of which an account will be found under those subject headings; the *Protochloride and Perchloride of Mercury*, commonly known as Calomel, and Corrosive Sublimate, are among the most valuable of the combinations into which this gas enters. See *Mercury*.

CHOCCLATE and COCOA. These well-known articles of diet are prepared from the seeds or beans of the *Theobroma Cacao*, a tree found chiefly in the West Indies and South America. The cocoa nibs, as they are called, undergo a process of roasting to free them from the husks and develop the aroma. When genuine, and properly prepared, they make a highly nutritious beverage, consisting of a large proportion of oily or fatty matter, some starch, and a peculiar principle called *chromine*, which, according to Liebig, approaches very nearly to *theine*, and *caffeine*, the characteristic principles of tea and coffee, in its nature and composition; it has not, however the

same stimulating properties, and therefore Cocoa may be taken by those with whom, from weakness of nerves or other causes, these beverages would be likely to disagree. Cocoa in a perfectly pure state can seldom be obtained; the only way is to purchase the nibs and crush and boil them. In the various preparations sold under the name of "flake," "granulated," "homœopathic" Cocoa, and the like, there is an admixture of sugar, starch, flour, bean meal, cocoa husks, or some foreign substance, which is not so expensive as the Cocoa itself, and which, if it be not deleterious, reduces and alters the quality of the article purchased. Chocolate, of course, as a professedly manufactured article, is liable to any amount of adulteration which may be deemed expedient by the preparer. Ochre, Red Lead, Vermilion, Sulphate of Lime, Chalk, Tallow, are among the substances said to be employed in the preparation of the cheap kinds for the market, therefore one had need be careful of whom he purchases his chocolate, and to avoid that which is offered at a particularly low price. The French manufactured chocolates and cocoas are said to be less adulterated than the English. All the beverages of which Cocoa is the basis are apt to disagree with weak stomachs, on account of the oil which they contain; but to those of strong constitution, and particularly if engaged in active duties, they may be recommended on account of their large amount of nutrition; many of them, however, contain vanilla, and this renders them somewhat indigestible.

CHOKE DAMP. The foul air of mines, wells, &c., which is unfit for the purpose of respiration. See *Carbonic Acid*.

CHOLE (Greek for *Bile*). Hence we have *Chologogues*, a term formerly applied to purgatives, which caused bilious discharges; *Cholodocus* or *ductus*, the common bile duct; *Cholate*, a salt of the bile; *Cholic Acid*, a peculiar animal acid which has a sweet taste; *Cholesterine*, the principle of the bile, and of biliary calculi; this substance, heated with nitric acid, produces *Cholesteric Acid*, whose salts are called *Cholestorates*. See *Bile*.

CHOLERA. There is some doubt as to the origin of this word, some ascribing it to the Greek *chole*, bile, and *reo* to flow, and some to *cholera*, a waterspout. But from whatever the term may come, there is no doubt whatever that it indicates one of the most fearful diseases to which human nature is liable, and one, too, which originates in biliary derangement: this is more especially the case with the *British or Bilious Cholera*,

to which we will first turn our attention. Its symptoms are nausea, pain in the stomach and bowels, with distension; vomiting, for the most part, of bilious matter, with severe griping; followed by cold clammy sweat, and cramp in the lower extremities. This disease most usually occurs in the hot summer and autumnal weather, when it becomes epidemic, and often rages with great violence; in warm climates, cases occur at all seasons of the year; and those coming from countries having a lower temperature are most likely to be attacked. The probable *cause* is some derangement of the biliary secretion; the bile is either rendered more acrid by the action of the heat, or increased in quantity; sometimes the immediate cause would appear to be a sudden chill which obstructs the perspiration, or the eating of unripe or acid fruits, or taking indigestible food. That the liver, and mucous membrane of the stomach and intestines are the principal parts affected, there can be no doubt; but that the former is not always the primary origin, is shewn by the circumstance that purging and vomiting sometimes come on and continue for awhile before any bile is noticed in the discharged matter; for *treatment*, see *British Cholera*, head *Bile*.

Cholera Morbus is but another form of the above, like which it is often preceded by heartburn, a sour taste in the mouth, and flatulency; there is vomiting and purging of a decidedly bilious character; griping and distension of the stomach, cramps, and ultimately convulsions; clammy sweats, difficulty of breathing, an anxious expression of face, constant hiccup, and if relief is not quickly obtained, death.

Asiatic or Malignant Cholera, with which we first became acquainted in this country in the autumn of 1831, is a more severe form of the disease than either of the above; it very commonly comes on without any premonitory warning whatever, and the patient is a corpse in a few hours. Cold perspiration, with prostration of strength, vomiting, and purging, but not of bile in this case, but a thin, colourless, odourless fluid, like rice-water; then come the dreadful cramps, seizing on the calves of the legs, the thighs, the fingers, the toes, and all muscular parts; the body is bent, the limbs twisted, the face becomes cadaverous and corpse-like, with sharp and contracted features, sunken eyes, with a dark circle round them, blue lips, and a tongue of a leaden hue; the look wild and pitiful, the breathing hurried and difficult, the voice low and husky, the form seems to shrink and dwindle visibly, the pulse, at first small and weak, becomes rapidly more

so, until its feeble beatings can scarcely, if at all, be detected; a smell, like that of a charnel-house, is exhaled from the body, which loses its natural warmth, as more withered and ghastly becomes the face; and the arms and hands wrinkled like those of a washerwoman, with livid fingernails fall helplessly at the side, and the weak, wailing voice sinks to a whisper in its frequent calls for drink, to quench the intolerable thirst. To the last, there appears to be a wandering kind of consciousness, but no power to express a wish or will; there is utter indifference in that forlorn look which the sufferer occasionally casts around, and no ray of pleasant recognition lights up the eye when it rests upon familiar faces; then comes the perfect insensibility of collapse, and soon the feeble flickering light of life is quenched; unless, as is sometimes the case, re-action sets in; then the pulse begins to flutter, like a bird escaping from the snare, the skin to get warm again, the dim eyes to brighten, the face to assume a more natural hue, the flaccid muscles to become more tense, the pulse is again perceptible, and it may be seen at a glance that the crisis is past, and the vital energies of the patient have rallied, and are likely to carry him through this eminent danger.

With regard to the *treatment* of Cholera, there is much disagreement among medical men, and so rapid is the progress of the disease, that there really is little time for the operation of remedies. At times, when it is likely to be prevalent, particular attention should be paid to the state of the bowels, and the slightest tendency to looseness should at once be checked. Chalk mixture, with a little Aromatic confection added, taken after each loose motion, add 5 or 10 drops of Laudanum to each dose, and take milk and farinaceous diet; avoid unripe fruits, hard puddings, pastry, and any indigestible food; live temperately, but not too abstemiously, so as to weaken the system; be careful as to the purity of the water drunk, and to avoid chills, or whatever tends to lower the standard of health. If the bowels are confined, do not take saline aperients, but such as are of a warm, stimulating character, such as Rhubarb, combined with Magnesia, mixed in Cinnamon or Peppermint Water. If the more severe symptoms above described come on, obtain medical help immediately if possible; should it not be so, use every effort to keep up the temperature of the body by hot applications, apply friction to the muscular parts most affected with cramps; hot bran bags, with turpentine sprinkled over

them are good, mustard poultices, and strong Linaments. Let the patient gratify his intense thirst with copious draughts of cold water, in every quart of which has been dissolved 1 drachm of common Salt, the same of Carbonate of Soda, and 20 grains of Chlorate of Potash; administer every quarter of an hour, by placing it on the tongue, a powder containing Calomel and Opium, of each 1 grain; and about every half-hour a draught, with 20 drops of Sulphuric Ether, or 5 drops of Chloroform, with 10 drops of Laudanum, or Camphor Mixture. If these remedies fail, nothing more can be done, but they should be persevered in as long as there are any symptoms of life in the patient. With reaction comes Fever, which sometimes runs very high; this requires careful treatment. (See *Fever*.)

Some medical men recommend warm stimulating drinks, such as Brandy and Water, with cataplasms of Opium and Camphor, blisters to the stomach, and anti-spasmodic glysters. An emetic, followed up by the exhibition of large quantities of hot water, and dilute Sulphuric Acid, was found a very successful mode of treatment on the African station in 1854; of 106 cases treated, all, it is stated, recovered.

When the vomiting and evacuation of the bowels stay too suddenly, and spasmodic attacks follow, the action should be restored by mechanical irritation, and copious draughts of warm water, in which some neutral salt, such as Sulphate of Magnesia, has been dissolved; 20 drops of Laudanum, and 40 of Fœtid Spirits of Ammonia, in a little warm water, should also be taken in this case, about every half-hour. Very large doses of Calomel are given by some in this disease, but the propriety of such a course may be questioned; it is, perhaps, well to administer 5 grains at the outset, and follow it up with smaller doses, as above directed. Nothing can more clearly show how little is really understood of the nature of this terrible disease, than the diverse opinions entertained with regard to the proper remedial measures: it is, indeed, the pestilence that walketh in darkness, and whether contagious as some contend, or infectious, as others, or both, as seems likely, it warns us to be prepared for the summons that may come at any moment, to the presence of the great Judge of all.

CHONDROS. (Latin for *Cartilage*, which see); hence we have *Chondrology*, a description of cartilages.

CHORDEE (French from Greek *koron*, a chord). A painful erection of the penis, attending *Gonorrhœa* (which see).

CHORDA (Greek *Chorde*, a cord or tendon). Hence we have *C. tympani*, a filament of the vidian nerve, which enters the tympanum (see *Ear*); *C. tendineæ*, the tendinous strings which connect the *carneæ columnæ* of the heart to the auricular valves (see *Heart*); *C. vocales*, the vocal ligaments, and *C. Willisii*, the small fibres crossing the surface of the *Dura Mater*. See *Brain*.

CHOREA SANCTI VITI. A convulsive motion of the limbs, as of a person dancing. See *St. Vitus's Dance*.

CHORION (Greek for a domicile). The external membrane of the *Fœtus* (which see).

From the same root with *eidōs*, likeness, comes *Choroid*, resembling the chorion, a term applied to the plexus and web of the *Pia Mater*, and to the inner tunic of the *Eye* (which see) and *Brain*. The dermis or outer layer of the skin is also termed *Chorium*.

CHRONIC (Greek *chronos*, time). Diseases of long standing are so termed in contradistinction to *acute*, applied to the early and more active stages.

CHRYSOS (Greek for gold). Hence *Chrysobalanus*, a Golden Acorn, applied to the Nutmeg; *Chrysocola*, Golden Glue, meaning Borax; *Chrysomelia*, Golden Apple, the Seville Orange. These terms are now only found in old medical works.

CHYAZIC. A term derived from the initials of Carbon, Hydrogen, and Azote, and applied to an acid.

CHYLE (Greek *kylos*, juice). A milk-like fluid, which being separated from the chyme, or digested food, after it has passed from the stomach into the small intestines and become mixed with the bile and pancreatic fluid, is taken up by the absorbents called *Lacteals* (which see); also *Absorption*, *Digestion*, *Pancreas*.

From the same root comes *Chylification*, the process by which the chyle is separated from the chyme, and *Chylopoietic*, a term applied to the viscera and vessels connected with the formation of chyle.

CHYME. A grey semi-fluid matter, being the substance into which food is reduced by the process of digestion in the stomach before it passes into the duodenum, or small intestines. *Chymification* is the process by which the aliment is converted into chyme. (See *Aliment*, *Digestion*, as above.)

CICUTA. One of the Latin names for Hemlock, *Conium* being the other (which see). The alkaloid obtained from Hemlock is called *Cicutin*.

CICATRIX (Greek for a scar). A mark left after the healing of a wound or ulcer; hence

too, *Cicatrization*, the process by which wounds and sores heal.

CILIAE. The eyelids or lashes; hence *Cillary*—the name of arteries, processes, glands, &c., belonging to the *Eyelids* (which see).

CINCHONA (Latin for *Bark*, which see). Its active principle is *Cinchonine*, an alkaloid found most abundantly in the grey Peruvian Bark (*Cinchona Condaminea*); it is in the form of white, semi-transparent, needle-like crystals; has little taste when dissolved in water, but yields an intense bitter when taken up by acids or alcohol; its official preparations are Wine, dose 4 ounces; Tincture, 2 to 6 drachms; Syrup, 1 or 2 table-spoonfuls in scrofulous complaints. *Cinchonine* is, however, not much employed in modern medical practice as it is much less powerful, and, consequently, less to be depended on than *Quinine* (which see).

CINERITIOUS (Latin *cineris*, ashes). A term applied to the exterior part of the brain on account of its ashy colour; the Cineritious Tubercle is the floor of the third ventricle. (See *Brain*.) Pearlash, or impure Potash, has been sometimes called *Cineres Clavellata*, the latter term coming from *clavus*, a wedge, in reference to the little wedge-shaped billets into which the wood was split used to make *Potash* (which see).

CINNAMON. The bark of the *Cinnamomum Zeylanicum*, belonging to the natural order



Lauraceæ: it possesses cordial, carminative, and astringent properties, and is prescribed in dyspepsia, flatulency, diarrhoea, and vomiting, although frequently as an adjunct to bitter tonics, purgatives, and vegetable and metallic astringents: its active properties depend upon the presence of an essential oil (*Oleum Cinnamomi*), much used in flavouring sweets and confectionery; this is a powerful stimulant. *Cinnamon* enters into the composition of several pharmaceutical preparations; the dose of the Simple and Compound Powders, is from 5 to 20 grains; of the Simple and Compound Tinctures, 1 to 2 drachms; of the Water 1 ounce to 1½ ounces. See *Cassia*.

CINNABAR. A native metal, properly Sulphuret of Mercury, used in the prepared form of Bisulphuret, (*Sulphuretum Hydrargyri Rubrum*) for fumigating venereal ulcers. See *Mercury*.

CIRCULATION (Latin *circulus*, a circle). The flow of the blood through the heart, arteries, and veins: in man, as in warm-blooded animals generally, there is a double circulation; one being *pulmonic*, through the lungs, and the other *systemic*, through the whole system. In order that our readers may understand this, we will briefly trace out the course of the blood from the left ventricle of the heart, whence the vital fluid, of a bright red colour, and containing all necessary elements of nutrition, is pumped out through the aorta, and passes into all the arterial branches and capillaries, to deposit the nutriment required for each structure, giving out oxygen, and taking up carbonic acid in exchange, and then returning through the veins, of a deep purple, being loaded with carbon, through the *venæ cavæ* to the heart by the right auricle, which contracting, forces it into the right ventricle; and from thence it is propelled through the pulmonary artery into the vessels of the lungs, which, expanding in the act of inspiration, draw in the air by which the blood is re-oxygenised, losing in respiration its excess of carbon, and then flowing through the pulmonic veins into the left auricle of the heart, with its bright red colour and nutritive properties restored. This short passage from the great central organ of circulation to the lungs and back again, is what is called the *pulmonic* circulation; and the longer course which we have just described, through the whole system, is the *systemic*. From the left auricle, where we left the blood, it is forced by compression into the left ventricle, from whence we set out; and thus the process is repeated, while the principle of vitality is unim-

paired; it is quick or slow, according to the vigour of the constitution of the individual, and the healthful or diseased state of the several organs concerned in the production, transmission, and composition of the *Blood* (which see), also *Heart* and *Respiration*.

CIRCUMCISION (Latin *circumcido*, to cut). This operation, to which there are so many allusions in the Bible, consists in the removal of a circular portion of the foreskin of the prepuce. See *Phymosis*.

CIRCUMFLEXUS (Latin *circum*, about, and *flecto*, to bend). A term applied to a muscle which stretches the palate horizontally, and also to the axillary nerve, &c.

CIRRHOUS (Greek *kirros*, yellowish). A diminution and deformity of the liver is so called, when, under the influence of disease, that organ presents a dense, granular, and wrinkled and yellow appearance. See *Liver*.

CIRSOS (Greek *kirsos*). A varix, or dilated vein. (See *Varicose Vein*). From the same root come *Cirsocele*, a varicose enlargement of the spermatic vein, and *Cirsophthalmia*, a varicose affection of the blood vessels of the *Eye* (which see).

CITRUS. The name of a genus of plants belonging to the natural order *Aurantiaceæ*; from the *Citrus Aurantium* we obtain Oranges; from the *C. Begaradia*, the essential oil known as Essence of Bergamot; and from the *C. Limonum*, Lemons, the juice and peel of which are so largely employed in scorbutic and other complaints. (See the above several headings, also *Citric Acid*.)

CLAP. See *Gonorrhœa*.

CLAUSURA (Latin *claudo*, to shut). The imperforation of any canal or cavity.

CLAVATIO (Latin *clava*, a club). A kind of articulation of bones in which they are fixed, as the teeth in their sockets. See *Gumphosis*.

CLAVICULA (Latin *clavis*, a key). The clavicle, or collar bone, so called from its resemblance to an ancient key.

CLAVUS (Latin for a nail). A term applied to corns and to *Staphylosis*, or a tumour on the eyelid; hence, too, we have *Clavus hystericus*, a fixed pain in the forehead as if produced by a nail.

CLEISAGRA (Greek *kleis* the clavicle, *agra* seisure). Gout in the articulation of the clavicles. See *Arthritis*, *Choragra*, *Podagra*.

CLIMACTERIC (Greek *klimakterh*, the step of a ladder). The life of man is usually divided into periods or stages of seven years each, and they are distinguished as the 1st, 2nd, 3rd climacteric, and so on; the 9th being, by common consent, styled the "grand climacteric." When this is reached

there is in most cases, a perceptible decay, a giving way of the vital powers, which we term *Climacteric disease*, although there may probably be no affection of any particular organ that can be discovered. Its usual symptoms are loss of appetite, restlessness at night, sluggish bowels, quick pulse, furred tongue, emaciation, sharpening of the features, change of colour in the hair, and deepening of the lines of the face. After these signs of a call from the tomb, we have frequently swelling of the limbs, eruptions of the skin, feebleness of body, and mental apathy; often a distressing cough, difficulty of breathing, and chilliness on account of impeded circulation. The only *treatment* to be adopted is generous living, freedom from the cares and anxieties of business, and that generally recommended under the head of *Age* (which see).

CLIMACTERIC TEETHING. The production of teeth at a very late period of life, after the permanent teeth have been lost by accident or natural decay. When this does occur, it is mostly between the ages of 63 and 81, about the time of the grand climacteric period. See *Teeth*.

CLIMATE (Greek *klima*, a region). This term is used in a medical sense to denote the conditions of the atmosphere in different countries or districts, with reference to its effects upon the human constitution. There are few diseases which may not be in some way influenced by climate; it, therefore, becomes an important part of the medical practitioner's duty to ascertain in what way this influence is exerted; to make himself acquainted with the atmospheric conditions of different localities, so that he may be able to direct his patients to those in which will be most likely to find relief from the diseases by which they are attacked. There are many circumstances which conspire to alter and modify climate, such as a low or elevated situation; proximity to, or distance from the sea, or any large body of water; the nature of the drainage, the character of the soil, the amount of wood and of shelter from certain prevailing winds, &c. As a general rule, patients derive most benefit from a change of climate, when the locality to which they remove presents atmospheric conditions the reverse of those from which they come. There is no doubt, too, that the stimulating effect upon the mind, of novel scenes, and the excitement of travel, has much to do with the beneficial effects which are generally attributed to change of climate. The great desideratum in this country, is a sheltered situation, where those affected by pulma-

nary and other diseases, may breathe a mild and equable atmosphere during the winter and spring months. Sir James Clark, our greatest authority on this subject, has divided the milder parts of England into four districts, as follows:—1. *The South Coast*, including Undercliff, in the Isle of Wight, Hastings, Brighton, and parts adjacent to these places. 2. *The South-west Coast*, reaching from the Isle of Wight to Cornwall, and including Torquay, Dawlish, Sidmouth and Exmouth, &c. 3. *The Land's End*, including Penzance, Flushing, &c. 4. *The West of England*, comprehending the places along the borders of the Bristol Channel and estuary of the Severn; here we find Clifton, which has a more bracing and sharp atmosphere than that of the south-west coast, and is, therefore, better suited to a relaxed and languid habit, and less for pulmonary and other diseases, where there is irritation and inflammatory predisposition. Foreign climates, by the same authority, have also been classified and divided into six climatic zones, if we may so speak:—1. *The South-west of France*, comprehending the tract of country extending from Bordeaux and Bayonne to Toulouse, with the little town of Pau for its place of chief resort. 2. *The South-east of France*, comprehending the tract of country which stretches along the shores of the Mediterranean, from Montpellier to the banks of the Var, the boundary stream between France and Piedmont; here we have the town just mentioned, Marseilles, with its sharp, dry air, and Hyères, possessing all the advantages of a shelter from the northerly winds. 3. *Nice*, situated on the same line of coast as Provence, and also protected from the northerly winds, and especially the Mistral. 4. *Italy*, with its balmy and somewhat humid atmosphere, and also with its scorching Sirocco wind, known only in the summer, however, when invalids should not be there as the climate is too enervating. 5. *The Mediterranean Islands*, including Malta and Sicily, not desirable for the summer residence of invalids. 6. *The Atlantic*, including Madeira, the Canary Isles, the Azores, the Bermudas, the Bahamas, and the West Indies.

The result of these inquiries into the nature and character of various climates, is the recommendation that those who have *Pulmonary Consumption*, should go to Madeira, Rome, or Pisa in Italy, and in England, Torquay, or Undercliff. *Chronic Bronchitis*, Rome or Pisa, or Nice abroad; Torquay, Undercliff, or Brighton, at home. *Asthma*, Nice, or Rome, the city of

classical associations; *Chronic Rheumatism*, the same, the former being preferable where there is an irritable state of the digestive organs. *Gout*, Genoa, or the West Indies. *Scrofula*, Nice and Rome, or the West Indies. *Dyspepsia*, the south of Europe, and especially of Italy; also good for *Hypochondriasis*, and many other nervous affections. See *Air*, *Atmosphere*, *Respiration*.

CLINICAL (Greek *kline*, a bed). Medical studies pursued at the bedsides of the patients, where, in most hospitals, clinical lectures are delivered on the particular cases.

CLINOID (Greek *kline* and *eidos* likeness). Processes of the *sella tunica* of the sphinoid bone, so called from their resemblance to the knobs of a bed-post.

CLITORIS (Greek *kleio*, to hide). A part of the female pubendum concealed by the labia majora; hence, too, comes the term *clitorismus*, a morbid enlargement of the clitoris.

CLOACA (Latin *cloacus*, a sewer). The openings, in cases of necrosis, leading to the enclosed dead bones; so called, because often filled with offensive matter.

CLONIC (Greek *kloneo*, to move to and fro). A name for *Spasms*, (which see).

CLOVES (Latin *caryophyllus*, from Greek *karyon* a nut, and *phyllon* a leaf). These



are the unexpanded blossoms of the *Caryophyllus Aromaticus*, a plant of the natural order *Myrtaceæ*; they belong to the class of stimulating aromatics, are chiefly useful in flatulent disorders, to correct the griping tendency of purgatives, and as an adjunct to bitter tonics. Dose, of Powdered Cloves 2 to 8 grains; Infusion, 1 to 2 ounces; Tincture, 20 to 30 minims; Essential Oil, 2 to 6 drops—the latter is often used with good effect in tooth-ache; combined with Cajeput oil, Opium, and Camphor it is more likely to be effective.

CLUB FEET (in Latin *Pedes contorti*). A congenital distortion of the feet. See *Feet*.

CLYSTER or **GLYSTER** (Greek *Klyso*, to wash out). A well-known method of administering medicines, when, from some obstruction in the passage to the stomach, or other cause, it is impossible or inexpedient to give them in the ordinary way. In cases of lockjaw, diseased gullet, &c., where nutriment cannot be conveyed by the throat, it is sometimes thrown up by the rectum, and so life is sustained for a considerable time, perhaps until a cure can be effected. The nature of Clysters depends upon the objects they are designed to effect; thus, they are either emollient, anodyne, or purgative; they are often administered to assist the operation of opening medicines; or in cases where the stomach is in too irritable a state to retain them; and to destroy ascarides or maw-worms. The following select formula of Clysters may be found useful:—*Anodyne*, for dysentery, or violent purging, pain in the bowels, &c., take Starch, 8 ounces, Tincture of Opium, 1 drachm, Warm Water, a pint; mix. *Antispasmodic*, for colic, flatulency, &c., take Tincture of Assafoetida, $\frac{1}{2}$ an ounce, Tincture of Opium, 20 drops, thin Gruel a pint; mix. *Laxative*, Epsom Salts, $1\frac{1}{2}$ ounces; Olive or Castor Oil, a tablespoonful, thin Gruel, a pint; mix. *Astringent*, take powdered Galls $\frac{1}{2}$ an ounce, or Gallic Acid 1 drachm, Rain Water, warm, a pint; mix; useful in falling of the rectum, piles, &c. *Diuretic*, take Spirit of Turpentine $\frac{1}{2}$ an ounce, Yolk of an Egg, Infusion of Linseed, a pint; in stone, suppression of urine, tetanus, &c.; also good for Worms. *Nutritive*, Milk, or Mutton Broth, and Warm Water, equal quantities. A good *Emollient* Clyster is made by adding an ounce of Olive Oil to a pint of Barley Water; useful in peritoneal inflammation. A *Salt Enema* is made by adding a tablespoonful of Common Salt to a pint of tepid Water; useful to dislodge worms; and a *Tobacco Enema* by pouring a pint of boiling Water on a drachm of dried Tobacco leaves:

in strangulated hernia this may be injected with advantage; it has sometimes enabled the surgeon to reduce the gut, when every other method has failed: only half the quantity should be thrown up at once, or its effects upon the system may be very injurious. For modes of application, instruments, &c., see *Enemas*, *Lavements*.

COAGULATION (Latin *con* and *agere*, to bring together). The act of coagulation or forming into a solid substance; this may be either *spontaneous*, like the cohesion of the particles of blood; or *induced*, as the effect produced upon albumen by heat, alcohol, acid, &c. *Coagulable Lymph* is the fluid effused from wounds, which afterwards solidifies and becomes the bond of union, or *Cicatrix*, which see. *Coagulum* is distinguished, 1st, as *clot*, applied to the blood only; 2nd, *albumous*; 3rd, *curd*, applied to milk.

COAPTATION, a setting or joining of the bone. See *Fracture*.

COCCULUS INDICUS (Greek *kokkos*, a grain; literally Indian grain). A name given to the



berries of the *Cocculus Tuberousus*, the active principle of which is *Picrotoxia* (which see).

COCUS BUTYRACEÆ. The Mackaw tree, the kernels of which contain a proportion of *Palm oil* (which see).

COCCYX (Greek *kokkus*, a cuckoo). The lower end of the spine, so called from its supposed resemblance to a cuckoo's beak;

another name for it is the *Os coccygis*, a muscle of which is called *Coccygeus*. See *Cauda, Spine*.

COCHINEAL (Greek *kokkos*, a grain). Sometimes called *Coccinella*, an insect which feeds on several species of cactus, and has hence been distinguished as *Coccus Cacti*; in its dead state it closely resembles a wrinkled seed, or grain, hence its Greek name. Its use is chiefly as a colouring ingredient; but by some it is supposed to possess anodyne and antispasmodic properties, and, therefore, its employment in whooping cough: the dose of the powder is from 5 to 10 grains, it is usually given mixed with Salt of Tartar; dose of the Tincture is from 30 drops to 2 drachms.

COCHLEARIA OFFICINALIS, (Scurvy Grass). A common plant, possessing antiscorbutic and diuretic properties, formerly much used, but now seldom prescribed. The *Spiritus Cochlearie* is considered good as a wash for the mouth and gums in scurvy; it is also



taken for the same complaint, dose $\frac{1}{2}$ a drachm to a drachm; dose of the Juice, $\frac{1}{2}$ an ounce to 2 ounces, of the Syrup, $\frac{1}{2}$ an ounce to an ounce. See *Scurvy*.

COCHLEA (Greek *koklos*, a conch). A cavity of the ear, resembling the spiral shell of the snail. (See *Ear*.) From the same root comes *Cochlearis*, Latin for a snail's shell; a term applied to the spoons used for the administration of medicines; they are distinguished in prescriptions as *Cochlear*

amplius, mediocere, and *minimum*, a table, dessert, and teaspoon. (See *Apothecaries Measures*.) In the botanical genus, called *Cochlearia*, is included Horseradish and Scurvy Grass.

COCOA NUT. This well-known fruit of the *Cocos Nucifera*, one of the most common species of the palm tribe, cannot be recommended for family eating; it is very nice, but very indigestible, being rendered so by its oily nature and solidity of structure; it might probably be not so objectionable on this score, if pulped, or made into flour, but this, we apprehend, would detract from the flavour. The juice, or milk, as it is called, is, when fresh and sweet, wholesome enough, but we seldom get it so. It is described by travellers as most delicious, when drunk fresh from the tree in the hot countries where it is produced, being at once sweet and acidulous.

COCTION. (Latin *coquo*, to digest). The process of reducing the aliments to *chyle*, (which see,) and *Digestion*.

CODEIA. One of the alkaloids obtained from *Opium* (which see); when used, which is seldom, being much weaker than *Morphine* (which see), it is in the form of Syrup, the dose of which is about a drachm; its chief employment has been in *Whooping Cough* (which see).

COD LIVER OIL. This oil is prepared from the liver of the Cod fish, and some other allied species; it has of late years come into very extensive use as a therapeutic agent; it was formerly of good repute in the treatment of rheumatism, but being extremely nauseous, never obtained general acceptance; this objection is, in a great measure, obviated by the present improved methods of preparation, and the best Cod Liver Oil, being almost colourless, and free from taste or smell, except a slight fishy impregnation, may be taken by the most delicate stomach. For the revival of its use in this country, we are chiefly indebted to Dr. Hughes Bennett, of Edinburgh, who, in 1841, employed it as a curative agent in pulmonary consumption, over which it appears to exert a specific action. Since that time it has continued to advance in the estimation of the profession and of the public; and, certainly, its effects in some cases have been truly marvellous: consumptive patients, apparently on the brink of the grave, have experienced quite a renovation under its influence; the sunken cheeks have again become plump and tinged with the hues of health; the dim eyes have shone with their former brightness, and the dark rim around them has disappeared; the emaciated frame has gathered

flesh, and the weak vacillating step has grown firm and steady as of old. Such, we say, has been the effect in *some* cases; in very many, if not so marked, it has proved decidedly beneficial; so that the dicta of Dr. Williams—"we must pause ere we in future pass the terrible sentence of 'no hope' on the consumptive patient," is in no want of confirmation. There is some difference of opinion as to whether Iodine, Bromine, or Phosphorus, all of which are contained in Cod Liver Oil, is the peculiar principle which renders its operation so beneficial in arresting the progress of tubercular destruction of the lungs, in giving firmness to the muscles, and filling up the decayed tissues with adipose matter; but probably all three have a share in the effect produced. In all diseases connected with a scrofulous habit of the constitution, this oil has been used with great advantage; in general debility, its decidedly nutritive properties render it extremely valuable; and in atrophy, or wasting of the flesh in children, where the glands of the belly are knotted and hard, and the veins enlarged, it often effects a cure; in such a case it is given internally, about a teaspoonful twice a day, and also rubbed into the skin of the stomach three times a day.

The common dose of Cod Liver Oil for an adult is one tablespoonful, two or three times a day; sometimes double this quantity is given, but it is always advisable to begin with a small dose, and gradually increase. With regard to the best vehicle for its administration, this must depend greatly upon individual taste; but Milk, Orange Wine, Ale, or some bitter infusion, Cinnamon, or other aromatic water; and cold Coffee may be mentioned as among the best; for children it may be made into an emulsion with yolk of egg and sugar, or disguised in well sweetened Cocoa, in which state it is sometimes taken unknowingly; Raspberry Vinegar is not a bad vehicle. About an hour before a meal is the best time for taking this Oil; it is then less likely to cause nausea, and more likely to become assimilated with the food. Patients, who have become accustomed to it, experience a sensation of sinking and faintness when the usual dose is omitted, which fully bears out its character as a nutrient; with some it acts slightly as a laxative, and with others causes a difficulty of breathing, and a feeling of fulness in the chest and head, and even spitting of blood; but these effects are quite exceptional.

Medical professors are by no means agreed as to whether the pale or dark oils are the best; the former appears to contain the largest quantity of iodine, bromine, phos-

phorus, and salts of lime, soda, and magnesia; and the latter to be richest in the component parts of bile, butyric, and acetic acids: the pale is less likely to cause nausea, if it is really fresh and pure, so that it is more generally preferred; although that prepared under the direction of Dr. De Jongh, which is of a light orange colour, may be highly recommended as containing a large proportion of the peculiar principles which render this Oil so valuable, and especially of *Iodine* (which see).

CÆLIA (Greek *koilia*, the belly). Hence we have *cæliac*, a term applied to an artery which is the first branch of the aorta in the abdomen; and

CÆLIAC PASSION. A kind of chronic flux, in which the aliment is ejected in a half digested state; the symptoms are pains in the stomach, distension of the intestines with wind, white stools, and great exhaustion. The *treatment* is first an emetic and cathartic to clear the stomach, then warm tonics and carminatives; or, if the bowels continue relaxed, opiates and absorbents. Some consider this a kind of *Colic*.

COFFEE. The berries of the *Coffea Arabica*, and other plants of the natural order *Rubiaceæ*, from which, in a roasted state, the well-known beverage is prepared, which goes by this name. It is a tonic and stimu-



lant, and possesses exhilarant and anti-soporific properties which render it highly valuable in cases of poisoning by opium, alcohol, and other stupifying or narcotic poisons; it has also been found useful in hooping cough and asthma, and is a good vehicle for the administration of quinine and sulphate of magnesia, concealing very much the bitter and nauseous taste of those medicines. Coffee should not be taken where there is an over abundant secretion of bile, as it stimulates the system too much, and causes headache and other disagreeable symptoms; it is far more nutritious than tea, and is therefore a better beverage for the poorer classes: it exerts considerable influence over the brain and nervous system, and if taken too strong, and too frequently, as it often is by literary men, and others accustomed to mental occupation, it is likely to do mischief. Those who from inclination, or inability to purchase meat, live chiefly on unazotised or vegetable food, should certainly take Coffee, a strong cup of which is considered a good protection from the effects of malaria; it is more suitable for a morning beverage than tea, because it is less likely to affect the nervous functions. Coffee should be used freshly ground, and only infused in boiling water, never boiled; for invalids it may be made with half milk, and in this way, if not too heavy for the stomach, will prove nutritious.

The peculiar aroma of Coffee consists in an essential oil, of which it contains a large proportion; but its active principle lies chiefly in an alkaloid, called *Caffeine* (which see), and this is identical with *Theine*, the alkaloid of *Tea* (which see). When administered to counteract the effects of poison, Coffee should be fresh, pure, and strong, without milk or sugar: the hot infusion of 1 ounce of the ground berries to be taken about every twenty minutes. In their raw state, the berries possess febrifuge properties and are prescribed medicinally, most frequently for *Hemicrania* and *Intermittent Fevers* (which see): the dose is a scruple of the powder given every hour during the intermission of the attacks; it is also given in the form of a strong decoction, sometimes combined with Lemon juice. The negroes in the West Indies take an infusion of the raw berries to promote a flow of urine. For the sophistications of coffee, see *Adulteration*.

COHESION (Latin *cohereo*, to stick together). The power by which the component parts of a body cohere or keep together; it is the opposite of *Expansion* (which see), and *Healing, Wounds*.

COITUS (Latin *coire*, to go together). The conjunction of two sexes. See *Copulation*.

COLCHICUM. The seeds and bulbs of the *Colchicum Autumnale*, a plant of the natural order *Melanthaceæ*, which grows in this country in most meadows, and is commonly called Meadow Saffron, are much used in the medical treatment of acute and chronic rheumatism, on which they appear to exert a specific effect. For non-inflammatory affections generally, colchicum has of late been much administered; it is strongly irritant, diuretic, and purgative, and should be used very cautiously. It has been recommended in



gonorrhœa, with Tincture of Opium, low diet, and warm baths. On the continent it has been extolled as a remedy for dropsy and humeral asthma. Its principal forms of administration are Vinegar of Colchicum, dose 30 to 90 minims; Oxy-mel and Syrup, 1 to 2 drachms; Extract, $\frac{1}{2}$ a grain to 2 grains; Acetic Extract, the same; Tincture, $\frac{1}{2}$ a drachm to a drachm; Wine, 15 minims to a drachm. Vinegar and Wine appear to be the best menstrua for extracting the properties of Colchicum, which is the active principle of most nostrums sold as infallible

remedies for Gout and Rheumatism. One of them is Dr. Wilson's Gout Tincture; and another, very popular in France, is called *Eau Medicinale de Husson*. The following is its form of preparation:—Macerate 2 ounces of fresh Colchicum root, cut in slices, in four fluid ounces of Spanish White Wine; filter, and take from 20 to 30 minims twice a day. Old authors recommend the Meadow Saffron for gout, under the name of *Hermodyctyllus*. The juice of the bulb is very poisonous to dogs; hence its Dutch and French names—*Hundes hoden*, and *Tue-chein*.

COLD, as applied to temperature, may be defined as the absence of heat, or, more properly, *Caloric* (which see); also *Temperature*. The use of cold, in the treatment of disease, has long been known and highly valued. On the system generally it acts as a bracing tonic, strengthening and invigorating the frame. In certain forms of inflammatory disease, and where there is undue excitability of any organ, the application of cold is attended with the most beneficial effects. That of ice is generally applied, when the ice itself can be procured, but a very low temperature may be produced by various evaporating lotions made with spirits, &c., and other constituents: one of the most useful and easily procured is a compound of Muriate of Ammonia, commonly called Sal Ammoniac, and Nitrate of Potash, or Saltpetre, of each of these $\frac{1}{2}$ an ounce added to a quart of water fresh from the spring or well, should the weather be warm. The best spirit to use is Ether, next to that Pure Alcohol, but any strong spirit will produce the effect; moisten a piece of lint with it, and lay it over the part affected. See *Refrigeration*.

Cold can scarcely be spoken of as a disease, although it is the prolific source of many diseases, and a large proportion of the cases which the family doctor is called in to treat are termed colds, under which generic term, if we may so speak, are included *Catarrh*, *Influenza*, bronchial affections, and the incipient stages of *Bronchitis* (all of which see). As to the results of a cold, were we to particularize these, we might include fevers, rheumatic affections, and half the diseases to which the flesh is heir. In this climate, more especially, with its sudden changes of temperature, and variations in the condition of the atmosphere, persons are very liable to "catch cold," as it is called, and generally speaking, far too little care is taken to guard against this liability, and the effects of a "slight cold" when it is contracted.

The symptoms of a cold are familiar

to most persons, for there are few who have not experienced them; as a general rule the treatment should be avoidance of exposure to out-of-door atmospheric influences, unless the weather be very fine and mild; warm diluent drinks and diaphoretics at night to promote perspiration, with the use of the foot bath. The saying runs, "feed a cold and starve a fever," but this is not always the safe course; if there is an absence of febrile symptoms, which is rarely the case, a warm nourishing diet may be the rule, and medicines may be pretty nearly dispensed with, but if these symptoms are present, the system must be reduced by low diet and aperient medicines; 2 grains of Calomel, with ten grains of Dover's Powder should be given at bedtime, and a Senna draught in the morning, taking, during the day, a mixture like this: Sulphate of Magnesia, 2 drachms; Sweet Spirits of Nitre, 2 drachms; Wine of Tartarized Antimony, 1 drachm; Liquor of Acetate of Ammonia, 6 ounces; take a tablespoonful every four hours. A high medical authority has recently recommended a total abstinence from liquids; he says:—"To those who have the resolution to bear the feelings of thirst for thirty-six or forty-eight hours, we can promise a pretty certain and complete riddance of their colds; and, what is perhaps more important, a prevention of those coughs which commonly succeed them. Nor is the suffering from thirst nearly so great as might be expected." It is Dr. C. J. Williams, who writes thus:—"We have never witnessed any evil from this abstinence from liquors for the time prescribed; but it is not unlikely that it may do harm in persons with irritable stomachs; or in those liable to urinary disorders. Moderation in liquid food is one of the best preventives against the bad effects of exposure to cold. When there is a large quantity of liquid in the system there must be increased perspiration, and, therefore, greater risk from the effect of cold." We mention this new light thrown on the subject of treatment for cold, without fully recommending its adoption, having tested the opposite method and found it efficacious; it might do in some cases, but not, we apprehend, in the great majority. For directions for the treatment of cough and other concomitants of cold, see *Cough*.

COLD CREAM. This agreeable and cooling application, so useful for chapped lips and hands, and other excoriated surfaces, may be prepared in several ways; the following is, perhaps, as easy and as good as

any :—Melt four ounces of White Wax in a pound of Almond, or pure Olive Oil, and, when it begins to cool, mix gradually with it a pint of Rose or Elder Flower water, if the latter, add about 12 drops of Otto of Roses, or any other perfume which may be agreeable; if the former, the like quantity of Essence of Bergamot; the mixture must be kept constantly stirred until cold, or the oil and water will separate; if properly managed it will be perfectly smooth, nearly white in colour, and about the consistence of thick cream; it should be kept in covered pots with a piece of tinfoil between the lid and the pot.

COLIC, is a disease, of which nosologists enumerate seven distinct species; these are, 1, *Spasmodic*, accompanied by retraction of the navel, and spasms of the abdominal muscles (see *Cholera*); 2, *Stercoracious*, resulting from costiveness after long continued *Constipation* (which see); 3, *Accidental*, from acrid matter in the intestines; 4, *Painters'*, or *Devonshire Colic* (*C. Pictorium*), also called *Saturnina*, because the effects of lead, and Dry Belly Ache; 5, *Meconial Colic*, affecting new-born infants and resulting from retention of the *Meconium* (which see); 6, *Calculous Colic*, a fixed hardness in some particular part of the abdomen, resulting from the formation of *Calculi* (which see); 7, *Vermineous Colic*, resulting from *Worms* (which see).

The *symptoms* of colic, in general, are a painful distension of the lower region of the belly, with a twisting round of the navel, and very commonly vomiting, costiveness, and spasms. Among the most frequent causes may be named worms, poisonous or unwholesome substances, long undigested food, redundancy of vitiated bile, internal gout and rheumatism, intense cold, hard or acid fruits or vegetables.

The *treatment* must depend greatly upon the cause, thus in *Bilious Colic*, where there is loss of appetite, bitter taste in the mouth, great thirst, fever, costiveness, and vomiting, with spasmodic pains, mercurials and purgatives must be administered, with effervescing draughts, fomentations, and friction. If the symptoms become violent and inflammation of the intestines appears likely, bleeding by the lancet or leeches may be resorted to, especially if the patient be young and plethoric. In *Flatulent Colic*, where there is costiveness, pain, soreness, and griping of the bowels, rumbling, and distension, with inclination to vomit, and coldness of the extremities, the administration of aromatic cordials, with opiates and purgatives, warm applications to the

stomach, and antispasmodic clysters ejected every three or four hours; bleeding, as above, if inflammation is threatened. In *Hysteric Colic*, where there is nausea, spasms, costiveness, and great dejection of spirits, the proper course will be laxatives, if required, with Spirits of Ammonia, Sulphuric Ether, and after the bowels have been evacuated, Camomile Tea, or other bitter infusion, with a little anodyne. Turpentine clysters have been also found useful.

Although Colic is properly a painful affection of the colon, *without* inflammation or fever, yet it is frequently accompanied with febrile and inflammatory symptoms, and often results in *inflammation of the bowels* (which see); it may generally be distinguished from actual inflammation by the spasmodic contraction of the abdomen, the absence, or trifling degree of fever and insensibility to pressure, and also by the state of the pulse.

For Lead, Painters', or *Devonshire Colic*, so called because it formerly prevailed in Cyder counties, where leaden vessels were much used in the manufacture of the beverage, the same general remedies may be used as for other forms of colic: for the palsy, arising from the absorption of lead, which is generally confined to the wrists, galvanism, friction, and shampooing, with Bath, or other chalybeate waters. Those engaged in the manufacture of lead, or in occupations in which one or other of its preparations are frequently handled, may generally escape its baneful effects by strict attention to cleanliness; they should never take their meals where they work, or with unwashed hands; let them eat fat meat, and butter, and acidulous drinks, especially those rendered so by Sulphuric Acid: the men employed at the Birmingham white-lead works have been almost free from this disease, to which they were much subject before, since they have mixed a little of the above acid with their treacle-beer. From the first attack of Lead Colic, patients generally recover; but unless they change their occupations, or observe the above precautions with scrupulous care, the attacks are repeated, each time with greater violence, and they become, eventually, miserable cripples.

COLLAPSE (Latin *collabor*, to shrink down). A failure, more or less sudden, of the circulation or the vital power, as of the brain, or of the whole system. This occurs in some diseases which are immediately dangerous to life, such as *Cholera*, *Typhus Fever* (which see).

COLLIQUAMENTUM. A term applied by

Harvey to the first rudiments of the embryo in generation. From the same root comes also *Colliquative*, any excessive evacuation, as *Diarrhoea*, or *Perspiration* (which see).

COLLUM. (Latin for the *neck*, which see), also *Cervix*.

COLLYRIUM (Greek *kolyo*, to stop, and *rous*, a running). A wash for the *Eye* (which see).

COLOCYNTH. Bitter Apple or Cucumber, a plant of the natural order *Cucurbitaceæ*, called by botanists *Citrullus Colocynthus*, the decorticated fruit or pulp of which is a drastic purgative: it was used by the ancients in dropsical and lethargic diseases, but is now principally given in habitual constipation, in affections of the brain, as a revulsive, and in various diseases where an active purgative is required. In small



doses it is expectorant, diuretic, and alterative; in over doses poisonous, producing excessive irritation of the mucous membranes; the dose of the powder is from 2 to 8 grains; in this form it is seldom given; of the Pill, or Extract, from 5 to 10 or 15 grains; it should never be given without some aromatic, to correct its griping tendency, and to effect this object, is sometimes triturated with gummy farinaceous substances. A watery decoction, or infusion, has been recommended as less drastic than any other form of administration, and as especially good for worms, but this is not often used. *Colocynthine* is the active principle of this drug. See *Purgatives*.

COLOSTRUM. The milk first secreted after delivery.

COLPOCELE (Greek *kolpos*, the *vagina*,

and *kele*, a tumour). A tumour or hernia in the *vagina* (which see).

COLPOPTOSIS (Greek *kolpos*, and *ptosis*, a falling down). Prolapsus of the *Vagina* (which see).

COLTSFOOT (Latin *tussis*, a cough). This is a common English plant, whose powerfully expectorant qualities have rendered it celebrated as a remedy for coughs; hence its Latin name derived from the above root. *Tussilago farfara* is the botanical designation of the common Coltsfoot, the whole of which abounds in mucilage; it is slightly bitter, having tonic as well as demulcent properties: the common form of administration is that of a Decoction made by boiling a handful of the leaves in two pints of water until reduced to a pint; sweetened with a little Sugar candy, and acidulated with a slice or two of Lemon, this is a very pleasant and useful drink; a wineglassful may be taken three or four times a day.



The Syrup of Coltsfoot is much given by French physicians for chronic bronchitis. The herb boiled in Milk is good for consumptive patients with distressing coughs.

COLUMNA (Latin for a column). Applied to the *columnæ carneæ*, or muscular fasciuli of the heart, and to some other parts.

COLZA OIL. This is extracted from the seed of the *Brassica arvensis*, a well-known species of cabbage; this oil is used in the manufacture of soft soap, and also to burn in lamps.

COMA (Greek *keo*, to lie). Drowsiness, a state of insensibility resembling sleep, from which the patient cannot be aroused, or only to partial sensibility; this is generally the result of pressure on the brain, it may be from the effusion of watery fluid, or of matter, or, perhaps, the bone of the skull depressed by some external injury. This is called a *comatose* condition, and it exists in narcotic poisoning, in apoplexy, &c., and complete intoxication by alcoholic stimulants. Between Coma and fainting there is this marked difference: in the former, the action of the heart continues sufficiently perceptible; in the latter, not so. Two distinct forms of Coma are recognized by the faculty—viz., *C. Somnolentum*, in which the patient, when roused, immediately relapses; and *C. Vigil*, in which he is unable to sleep, although so inclined. For treatment, see *Apoplexy*, *Intoxication*, *Poisoning*.

COMMINUTED (Latin *comminuo*, to break in pieces). This term is applied to a fracture in which the bone is broken into several pieces. See *Fracture*.

COMMISSURE (Latin *committo*, to unite). A joint or seam; in anatomy applied to the parts which unite the hemispheres of the *Brain* (which see).

COMPLEXUS (Latin *complector*, to comprise). A muscle situated at the back part of the neck. See *Muscles*.

COMPOUND MEDICINES. These have been divided into two classes—viz., *Officinal Preparations*, or those ordered in the several Pharmacopœias; and *Magistral*, or *Extemporaneous Formulæ*. See *Medicines*.

COMPRESS (Latin *comprimo*, to press). A piece of folded linen or lint, placed by the surgeon generally under a bandage, where he wishes to make a *pressure* (which see).

From the same root comes also *compression* and *compressor*; the former term being generally applied to a diseased state of the *Brain* (which see); and the latter to a muscle which compresses a part, as that of the *Nose* and the *Urethra* (both of which see).

CONCENTRATION (Latin *concentro*). The strengthening of mixtures, solutions, &c., by getting rid of their watery parts; this is usually done by *Evaporation* (which see).

CONCEPTION (Latin *concipio*, to conceive). The first stage of generation on the part of the female. See *Generation*.

CONCHA (Latin for a shell). A term applied to parts which resemble a shell, as *C. Auris*, the cavity of the ear; and *C. Naris*, the turbinated portion of the ethmoid bone.

CONCRETION (Latin *concreresco*, to grow together). A term usually applied to the

formation of stones in the intestines. See *Calculus*.

CONCUSSION (Latin *concutio*, to shake together). This term is usually applied to injuries sustained by the brain and other viscera. See *Brain*, &c.

CONDUCTOR (Latin *conduco*, to lead). A grooved instrument used by surgeons to pass into a diseased part, by which to direct the operating knife, sometimes called the *Director* (which see).

CONDYLES (Greek *kondylos*, a knuckle). Rounded eminences in the joints of several bones, as the *humerus* and *femur* (which see). From the same root comes also *Condylloid*, a term applied to some of the openings of the occipital bone, through which the veins of the neck pass. *Condyloma*, a wart-like excrescence which appears about the *Anus* and *Pubendum* (which see).

CONFECTIONS (Latin *conficio*, to make up). Under this name are comprehended several medical compounds, including, according to the London Pharmacopœia, the *Conserves* and *Electuaries* (which see); strictly speaking, however, these are not true confections, of which we give a list of the principal in use:—1. *C. Amygdalarum* (C. of Almonds); 2. *C. Aromaticum* (Aromatic Confection); 3. *C. Aurantiorum* (C. of Seville Orange); 4. *C. Cassiæ* (C. of Purging Cassia); 5. *C. Opii* (Confection of Opium); 6. *C. Piperis Nigri* (C. of Black Pepper), commonly called Ward's Paste, for *Fistula*; 7. *C. Rosæ Caninæ* (C. of Dog Rose); 8. *Rosæ Gallicæ* (C. of the Red Rose); 9. *C. Ruta* (C. of Rue); 10. *C. Scammonii* (C. of Scammony); 11. *C. Sennei* (C. of Senna), Laxative Electuary; the composition and properties of these are all spoken of under the several heads of their principal components.

CONFLUENT (Latin for to flow to). Applied to a form of inflammatory disease which spreads rapidly over the surface of the skin, as confluent *Small Pox* (which see), also *Variola*.

CONGESTION (Latin *congero*, to amass). Applied to undue fulness of the blood-vessels: those of the brain are most usually so affected, owing to the unyielding nature of the bones of the cranium, which do not admit of expansion for any increased quantity of blood which may flow in. Most of the other important viscera are contained in cavities with yielding walls; and, in them, a greater fulness of the veins than usual is not generally attended with such dangerous effects.

The cause of congestion may be anything which impedes the whole circulation so as to increase the action of the heart; any pressure

on the veins which obstructs the passage of the blood through them; a dilation of the coats of the veins from debility; cold applied to the surface of the body, or a dry state of the skin; a decay of the cells in the small secreting cavities, blocking them up, and thus causing local congestion, which, if not relieved, may lead to that of the whole system. See *Brain, Chilblains, Hypertrophy*.

CONGIUS. A measure capable of containing a gallon, or eight pints.

CONGLOBATE (Latin *conглоbo*, to gather into a ball). Applied to a gland of a globular form, like those of the absorbent system. See *Absorbents, Glands*.

CONGLOMERATE (Latin *conglomerato*, to heap together). A cluster of glands, as the *Parotid, Pancreas* (which see).

CONIUM. Common Hemlock (Latin *Conium maculatum*. See *Cicuta, Hemlock*.

CONJUNCTIVA (Latin *conjungo*, to unite). The lining membrane of the posterior surface of the eyelids which is continued over the fore part of the globe of the *Eye* (which see). *Conjunctiva Granular* is a diseased condition of this membrane: it usually follows purulent *Ophthalmia* (which see).

CONSERVES (Latin *conservo*, to keep). A composition of fruit or other vegetable matter and sugar; the preserves used medicinally will be found under the head of *Confections*.

CONSTIPATION (Latin *constipo*, to crowd together.) Habitual confinement of the bowels, which is produced from want of tone in the muscular coat of the stomach, or a tendency to absorb the fluid elements of the fæces, so that they are left in too solid a form for the muscles to act upon; the latter is more commonly the case. See *Costiveness*.

CONSTITUENS (Latin *constituo*, to dispose). A constituent part of a medicinal formula, being that which imparts a convenient or agreeable form; the vehicle. See *Prescriptions*.

CONSTITUTION (same root as above). This is—first of the body, meaning the condition of the body; the *propria*, or individual peculiarities, as distinguished from the *communis*, or qualities which are common to all: thus we say, this or that man's constitution, as something distinct from that of the human race generally. (See *Diathesis*). Second, the constitution of the air, meaning the peculiar state of the atmosphere, or vapours arising from the earth, in relation to their effects upon the health of man, according to which they are denominated Bilious, Dysenteric, &c. See *Atmosphere, Epidemics, &c.*

CONSUMPTION (Latin *consumo*, to waste away). A wasting of the body, resulting

generally from disease of the lungs, in which case it is called Pulmonary Consumption or *Phthisis*, (which see); for an account of that form of the disease called Nervous Consumption, (see *Atrophy*).

Pulmonary disease prevails in England to a greater extent than perhaps in any other country; as many as 70,000, it has been stated upon good authority, die annually of this alone. The impression is generally entertained, that the variableness of the climate, and the prevalence of damp and fogs is the chief cause; this may be, to some extent, true, but much is owing to hereditary predisposition, how acquired we need not pause to inquire, amid the unfavourable circumstances as to ventilation, diet, clothing, &c., in which a large proportion of our population live. The formation of tubercles on the lungs may arise from various causes; where there is predisposition, the most trifling exposure to cold or damp, the least deviation from the rules of health, will frequently develop the disease; and even where there is not, it requires but little to set it up; and this is the case, not only in England, but all through Europe: it is found that in the German, French, Italian, and other Continental hospitals, consumptive cases form as large a proportion of those treated as they do with us. Among the most general of the predisposing, or exciting causes, may be mentioned, in addition to the hereditary taint already spoken of, a scrofulous habit of body, a peculiar formation of the chest compressing the space appropriated to the lungs, so that they cannot have free play; this is sometimes the result of artificial compression, against which we cannot raise our voice too loudly, or too often, (see *Stays, Tight Lacing*). Inflammation of the lungs, catarrh, syphilis, king's evil, small pox, measles, or any disease which has a tendency to impair the quality of the blood, or weaken the system, may be classed among the causes of Consumption; as may certain employments which necessitate the breathing of an atmosphere loaded with impurities, causing irritation of the pulmonary passages, which is likely to extend to the lungs themselves, and initiate tubercular disease. Previous to the invention of magnetic guards for the mouth, which attract the minute particles of steel dust, and prevent their entering, needle grinders seldom attained to the age of forty years; and it is now found that hair dressers, bakers, millers, masons, bricklayers, laboratory men, coal-heavers, chimney sweeps, dressers of flax and hemp, and workmen in leather warehouses, are all especially liable to pulmonary disease. A

slight cough resulting from a cold caught by sitting in a draught, or getting wet, or wearing damp linen, will if neglected often become worse, and eventually lead to Consumption. So too will scrofula, with which a large proportion of the ill-fed, ill-clad, and worse-housed lower classes are affected. It has been noted, that soon after scrofulous eruptions have disappeared from the surface of the skin, symptoms of Phthisis have shown themselves, a clear indication that the disease had retreated to the lungs, which would appear to be its internal stronghold.

The *symptoms* of Consumption, although they vary somewhat with the cause of the disease, yet have a general similarity in their character. There is at first languor and a sense of debility. On the slightest exertion the pulse becomes accelerated, and the breathing difficult; there is often a short, dry cough, which increases in strength and frequency. At first there is little or no expectoration, but gradually this comes on, and eventually becomes copious, the thick mucus being after a while streaked or tinged with blood. There is gradual emaciation of the body and loss of strength; then come night-sweats, disturbed rest, and a hectic flush, or spot on the cheek—constant thirst, and a cough which seems to gather strength, in proportion as the frame, which it racks and tears, becomes more and more attenuated. There is at first a sense of tightness on the chest; then, as the respiration becomes more laboured, succeed sharp, cutting pains, particularly under the sternum, or breast-bone, and at the time of coughing; very commonly the mind partakes of the weakness of the body, and sinks into a desponding state, or has sudden alternations of hope and fear, clinging, however, frequently to the latter until life is extinct. The termination of the sad scene is commonly brought about by the rupture of one or more of the blood-vessels of the lungs in a fit of coughing; hæmorrhage ensues, and the patient sinks exhausted, to add another to the long catalogue of victims to consumption.

Is the disease curable? We must answer, sorrowfully—No! If taken in the earlier stages, its progress may probably be arrested; and, with great care, where there is known to be hereditary predisposition, it may possibly never be developed at all; but when the tubercles are formed, and suppuration has commenced, the cough become distressing, and the expectoration considerable—although by the application of certain remedies, a removal to a mild climate, and a careful guarding against all adverse in-

fluences, the progress of the disease may be for a time arrested, and so the life prolonged—yet we hold a perfect cure to be impossible: the disease is not dead, but sleeping, and may at any moment awake, and advance with rapid steps to the completion of its fearful work.

CONTABESCENTIA (Latin *contabesco*, to waste away), a gradual loss of flesh. See *Atrophy*, *Consumption*.

CONTAGION (Latin *contingo*, to touch one another). Properly speaking, those are contagious diseases which are propagated by actual contact, as in the case of the *Itch* (which see); or by inoculation, as the *Cow-pox* (which see); but the term is now generally used in its more extended meaning, of *infection* (which see). Most of the diseases which are contagious are infectious also; that is, they are propagated through the atmosphere, whose impurities would seem to be the soil, if we may so speak, on which the seeds of disease are carried hither and thither, and deposited wherever a suitable receptacle can be found; that is, wherever there is a human system in such a condition as to predispose it to receive the calamitous visitation. That peculiar atmospheric conditions favour the propagation of contagious disease, there can be no doubt, and not always are they appreciable; certain electrical disturbances, a superabundance of heat and moisture, bad smells arising from cesspools, open ditches; and accumulations of decayed animal and vegetable matters, are all favourable to contagion, which may be hidden in articles of dress and furniture in a latent state, and after a time work with deadly effect upon those with whom these articles come in contact.

FOMITES is the name which has been given to materials impregnated with contagious diseases; wool or cotton, or any loose texture appear to be peculiarly adapted for such impregnations, and they have been known to propagate the disease after a long period, hence the danger of buying second-hand clothes, bedding, carpets, sofas, or other articles of that description; hard and polished substances are not likely to serve as fomites. It will be evident from this, that from the chambers of persons suffering from Small Pox, Malignant Fevers, &c., all superfluous drapery or clothing should be removed, and on the recovery or death of the patient, care should be taken that the room should be thoroughly cleaned, and every article, if not destroyed, be subjected to a course of purification, first by washing, next by fumigation with *Chlorine* (which see) and lastly by a lengthened exposure to light

and air. A temperature of 212° Fahrenheit, to which textile fabrics may be subjected without injury, is said, on the authority of the late Dr. Hardy, of Manchester, to destroy the power of propagating contagious disease in fomites; a baking process may be recommended for such articles. Glazed calico dresses may also be recommended for the attendants on sick persons; and in chambers after the death or removal of a patient, the walls should be scraped and freshly lime-washed, if not papered, and if they are, the old paper should be taken down, and fresh put up; Chlorine also should be diffused through the apartment for several days or nights in succession. Where Chlorine cannot be procured, the steam of Vinegar thrown upon red hot iron, or live coals, the fumes of Muriatic Acid, and the absorbent properties of Quick Lime may be employed, but they are not to be greatly depended on. See *Disinfectants*, &c.

CONTRACTIBILITY (Latin *contrao*, to draw together). 1st. meaning—The property by which the fibrous tissues, after having been temporally extended, return to their former position. 2nd. The property by which they contract on the application of a stimulus; this last should perhaps be called *Irritability*, (which see.) From the same root comes *Contraction*, a rigid state of the joints.

CONTRAYERVA. The root of the *Dorstenia Contrayerva* is tonic, stimulant, and diaphoretic, and was formerly much administered in low and malignant fevers, in exanthematis and debility of stomach, and even regarded as an antidote to poisons;



the aqueous Decoction is mucilaginous, and, containing no astringent matter, is not affected by salts of iron, for which it forms a good vehicle; the dose of the Powdered Root is from 5 to 30 grains; there is also a Compound Powder, which is made up into round lumps, and sold as Contrayerva Balls, much given to children in the fever and dysentery, which often accompany dentition.

CONTRA-FISSURE (Latin *contra*, against, and *findo*, to cleave). A fracture of the skull, produced by a blow, opposite to the part on which the fracture takes place.

CONTRA-INDICATION (Latin *contra*, and *indico*, to draw). Circumstances which forbid the administration of remedies.

CONTUSIONS (Latin *contundo*, to bruise.) See *Blow* and *Bruise*.

CONVALESCENCE (Latin *convalesco*, to grow strong.) The state of recovery from *Sickness*, which see.

CONVULUTA (Latin *convolvere*, to roll together). A term employed for the upper and lower turbinated bones of the *Nose*, (which see); hence, too, we have *Convulsions*, applied to the windings and turnings of the cerebrum, and to the foldings of the small intestines.

CONVOLVULUS (same root as above). One of a genus of plants of the natural order *Convolvulaceæ*, in which we find two well-known emetic purges, viz., *Jalap* and *Scammony* (which see).

CONVULSIONS (Latin *convello*, to pull together). Involuntary contractions of the muscles of a part or the whole of the body; generally with corresponding relaxations, but sometimes with rigidity and tension: in the former case, they are called *clonic spasms*, as *Hysteria*; in the latter, *tonic spasms*, as *Lock Jaw*; when the convulsions are slight and rapid, they are called *Tremours* (which see). They are universal, affecting all the limbs more or less, and the muscles of the face and those of respiration, as in epilepsy, and the convulsions of children; and partial, when they only affect some of the muscles irregularly as in *Chorea* or *St. Vitus' Dance* (which see).

The chief symptoms of convulsions are violent spasmodic affections, with or without intermission; previous to their coming on there is generally giddiness, coldness of the extremities, dimness of vision, tremblings, and a creeping chill up the spine. When the fit is on, the teeth chatter, the tongue is protruded and often bitten, there is foaming at the mouth, the eyes roll wildly, there is a struggle for breath, and a clutching of the hands, which are often

clenched so that the nails enter into the flesh; sometimes the lips and cheeks and the whole surface of the face and arms become purple, and the veins stand out as though they would burst; and so great is the muscular force exerted that several attendants are required to keep the patient from bodily injury. A violent paroxysm may last but a few minutes only, or for several hours, and may have longer or shorter intermissions. It is followed by extreme languor, frequently by head-ache and giddiness, but these often pass off very quickly and leave no symptoms of constitutional derangement whatever.

The *causes* of convulsions in children are generally the lodgement of acrid matter in the intestines, flatulency, the irritation of teething, worms, water on the brain, the striking in of a rash, or the accession of some disease, such as small pox, scarletina, &c. A very trifling functional derangement will often be sufficient to produce them, and the younger and the more irritable the child is, the more liable will it be to their attacks.

The proper *treatment* will depend greatly on the cause: if it be worms, give *Vermifuges* (which see) and *Anthelmintics*; if teething, scarification of the gums; if improper food and indigestion, a gentle emetic and afterwards an aperient; if acrid matter in the bowels, a laxative clyster and aperient; if flatulency, carminatives; if repelled eruptions, the warm bath; if effusion on the brain, cold lotions to the head, and small doses of Calomel, frequently repeated, with purgatives, if the bowels are sluggish; hot applications to the extremities, also, are advisable in this case, and sometimes leeches to the head; but it is hazardous to apply them, except under professional direction. In all cases of infantile convulsions, and in some of adults, the warm bath is advisable; the temperature should be about 98°, and in most cases opening medicines, with at least one dose of Calomel put on the tongue.

In adults, convulsions may be apoplectic, epileptic, hysterical, or puerperal, as the case may be, and the treatment is described under those particular heads. Some narcotic poisons produce them, such as Opium, Prussic Acid, some kinds of Fungi, Ardent Spirits and indigestible substances. In all these cases, emetics would be the first remedies, and the stomach-pump; then volatiles and stimulants, as Ammonia, Valerian, and a stream of cold water poured upon the head from a considerable height. Convulsions may be caused by excessive mental emotion and sometimes by long continued diseases,

such as *Dropsy*, *Jaundice*, and *Fever* (which see).

COPAIBA or **COPAIVA**, sometimes called **COPIVI**. A balsam, or a resinous juice, procured by incisions in the bark of the *Copaifera Multynga*, and other species of the order *Leguminosæ*. It is strongly



diuretic, and stimulates the mucous membranes generally; in large doses laxative, and is commonly given in diseases of the urinary organs, especially gonorrhœa; it is also useful in chronic affections of the chest, and hæmorrhoids, or *Piles* (which see). It may be applied externally with advantage to chilblains and indolent ulcers. The dose is from 10 to 60 minims, in plain or aromatic water, Bitter Infusion, or Tincture, or any convenient vehicle; to some the taste is extremely nauseous, and may best be got rid of by chewing some Orange Peel after it. An Emulsion of Copaiba is sometimes made by mixing the Balsam with mucilage, yolk of egg, or Liquor of Potash; it should be strongly flavoured with Oil of Cinnamon. There is also an Oil of Copaiba, dose 15 to 20 minims. Syrup, 2 to 8 drachms, and Resin, 10 to 30 grains. Copaiba Capsules are formed by enclosing the Balsam in little vesicles of Gum Acacia; in this manner it may be taken without the objectionable flavour being noticed; the capsules may be bought of any druggist, with directions for use.

COPALCHI. A plant called by botanists *Croton Suberosum*, whose bark is sometimes

used as a bitter tonic and antispasmodic. Like Cascarrilla, it may be administered in atony of the stomach and bowels, and other cases which require aromatic tonics. The dose of the Infusion is from 1 to 2 table-spoonsful thrice a day; Tincture, 1 or 2 teaspoonsful; Extract, 1 or 2 grains.

COPPER (Latin *cuprum*). A native metal, the salts of which, although poisonous, are employed medicinally, being astringent, tonic, and emetic in their operations; externally they are caustic and detergent. The following are the principal of those so used; *Cupri acetate*, and *diacetate*, Verdigris, crystallized and uncrystallized, sometimes known as *Ærugo*; they are scarcely ever used for other than external purposes, the uncrystallized kind entering into the composition of an ointment, *Unguentum Æruginis*, which is applied to foul ulcers to cleanse and stimulate them, and also of a plaster, *Emplastrum Æruginis*, often employed as a corn plaster.

Ammoniated Copper (*Cupri Ammoniac Sulphas*) is a tonic and antispasmodic; sometimes given in epilepsy, chorea, &c.; the dose is from $\frac{1}{4}$ to $\frac{1}{2}$ a grain gradually increased to 3 grains; there is a Pill of the Edinburgh Pharmacopœia (*Pilule Cupri Ammoniac*), in which form it is commonly administered, it is also used extensively in lotions and collyria.

Sulphate of Copper (*Cupri Sulphas*). Generally known as Blue Stone, is a powerful tonic and astringent, given medicinally in doses of $\frac{1}{4}$ to $\frac{1}{2}$ a grain or more; as an emetic 5 grains act very promptly, and it is therefore good in poisoning by narcotics; externally used in astringent and detergent lotions, and applied dry as a caustic to destroy fungoid growths.

Carbonate of Copper (*Cupri Carbonas*). Prepared by the addition of Carbonic Acid to a solution of the Sulphate, useful as an application to running sores and eruptions on the scalp, &c.

Nitrate of Copper (*Cupri Nitras*). Used only as a caustic.

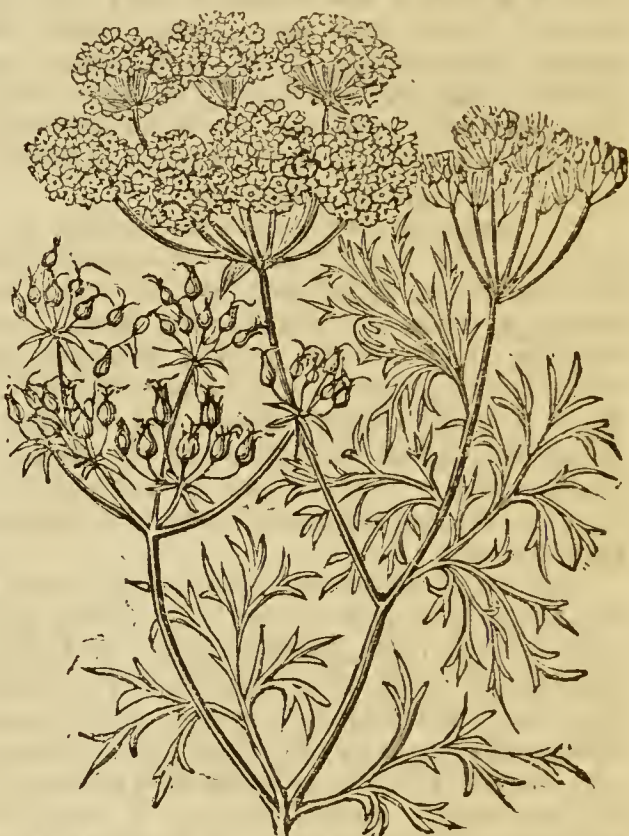
COPPERAS. Green Vitriol, or Sulphate of Iron (which see).

CORACO (Greek *korax*, a crow). Surgical terms compounded of this word are applied to muscles which are attached to the *coracoid process*, which forms the upper and anterior point of the scapula, and is so called from its resemblance to a crow's beak.

CORDIS (Latin *cor*, the heart (which see). From the same root come also *Cordials* or *Cardiacs*, warm medicines (see *Carminatives*); and *Core*, the inner part of

any thing, applied to the hard centre of *Corns* (which see); and to the slough which forms at the bottom of *Boils* (which see).

CORIANDER SEEDS. Produced by the *Coriandrum Sativum*, a plant of the natural order *Umbelliferae*, is cordial and aromatic in a moderate degree, and is chiefly used to correct the griping tendency of active pur-



gatives, especially Senna, in some forms of the Confection, Infusion, and Tincture of which, it is an ingredient.

CORNEA (Latin *cornua*, a horn). The anterior transparent portion of the globe of the *Eye* (which see). Hence we have *Cornea Opaca*, a term formerly applied to the *Sclerotica* (which see), and *Eye*.

CORNU CERVINA (Latin for Horn of Deer). (See *Hartshorn*). From the root *cornu*, a horn, we have several surgical terms, applied to parts supposed to resemble a horn, as *C. ammonis*, a part of the brain also called *Pes hippocampi*; and *C. uteri*, the appearance of the angles of the uterus in certain animals: also from their horny hardness, *Corns* (which see below); and *Cornea*, the interior transparent portion of the globe of the *Eye* (which see).

CORNS (Latin *cornu*, a horn). There are few persons who have not suffered from these troublesome excrescences, which arise from a thickened state of the outer, or scarf skin, caused generally by the pressure or friction of tight, or ill-fitting shoes; the sensible, that is the true skin, feeling the pressure, endeavours to protect itself by

throwing up a sort of defence, which assumes a conical form, having the apex within pressing upon the tender skin, and often causing intolerable pain, and sometimes inflammation to such an extent as to form an abscess at the point.

In the *treatment* of Corns, the first object should be to remove the exciting cause; comfortable, well-fitting boots or shoes, should be substituted for those of an opposite character, and the Corn, after the feet have been soaked in warm water to soften it, should be pared carefully away, particular care being taken not to wound the more sensitive part. When the outer surface is removed, there will be perceived in the centre a small white spot, which should be carefully dug out with a pointed knife or pair of scissors. When this too is removed, cover the seat of the Corn with a small circular piece of thick soft leather spread with Soap or Diachylon plaister, and leaving a small hole in the centre, corresponding with that from whence the root of the corn has been taken. Should any of this latter remain so as to cause irritation, apply to it, every second or third day, a piece of Lunar Caustic, scraped to a point, and slightly moistened. Some persons apply strong Acetic, or other acid; but this is not so effectual, and more likely to cause inflammation, which will be best allayed by a warm poultice of bread crumbs, moistened with Goulard Water, the foot being held up as much as possible, and the system kept in a cool state with saline aperients, &c.

Soft Corns, which form chiefly between the toes, are often very painful and troublesome; let them be cut away as close as possible with a pair of scissors and then dressed with rags wet with Goulard Water, or a solution of Sugar of Lead; Ivy leaves form, for such, a cool pleasant protection from friction, they should be put on fresh every day.

Beneath the corner of the nail of the great toe a peculiar kind of Corn sometimes occurs; it should be cut, or scraped out with the finger nail, and Caustic applied as above directed. Mere callosities of the skin on the hands and fingers are not Corns, although often called so; they have no roots and are not painful, therefore it is best not to interfere with them, for if removed others would come in their places, while the friction is kept up, in which they originate. See *Bunions*, *Chiropody*, *Warts*.

CORNUS (Latin for *Dogwood*, which see).

CORONA (Latin for a crown). From this root come the medical terms *Corona ciliaris*, the ciliar ligament; *C. glandis*, the per-

manent margin of the glans penis; *C. veneris*, venereal blotches on the forehead. From hence, too, we have *Coronal* the name of a suture on the head, and *Coronary* applied to the vessels, nerves, &c. which encircle the heart like a crown.

CORONE (Greek for a crow). A term applied to the acute process of the lower jaw bone, on account of its supposed resemblance to a crow's bill; and *Coronoid*, a process of the ulna of a somewhat similar shape.

CORPUS (Latin for a body; plural, *corpora*). Hence we have *Corpus callosum*, the firm substance which lies between the two hemispheres of the brain, called *Commissura magna*; *C. cavernosum*, and *C. spongiosum*, those which form the *Penis* (which see); *C. cavernosum Vaginæ*, the erectile spongy tissue of the *Vagina* (which see), this is sometimes termed *Retiformis* (net like); *C. fimbriatum*, a prolongation of one of the angles of the *Fornix* (which see); *C. highmorianum*, a prominence at the superior part of the testes; *C. luteum*, a cicatrix left in the ovarium after the bursting of a vesicle; *C. mucosum* (mucous body), a soft substance, or pigment, situated between the cuticle and the cutis, giving its peculiar colour to the *Skin* (which see); *C. pampiniforme*, a tendril-like plexus of the spermatic vein. In the plural we have *Corpora albicantia*, two white bodies in the cerebellum; *C. fimbriata*, the pleating of the margin of the processes of the *fornix*, sometimes called *Tænia hyppocampi*; *C. geniculata*, two knotty prominences at the interior surface of the cerebrum; *C. olivaria* and *C. pyramidalia*, two olive-shaped and pyramidical eminences of the *Medulla oblongata*; *C. quadrigemina*, four eminences, or tubercles, of the brain, which support the pineal gland; *C. restiformia*, two cord-like processes extending from the medulla oblongata to the cerebellum; *C. striata*, two streaky eminences on the lateral ventricle of the *Brain* (which see).

CORPUSCULUM (diminutive of *corpus*, Latin for body). A little body; hence *Corpuscula aurantii*, three small hard tubercles situated on the point of the valves of the aorta; they are also called *Corpora sesamoidea*, because they are about the size of the sesamum seeds.

CORRIGENS. A constituent part of a medical formula, signifying that which corrects its operation. See *Prescription*.

CORROBORANTS (Latin *corroboro*, to strengthen). Medicines, or whatever gives strength to the body, as Bark, Wine, Beef-tea, &c. See *Nutrients*, *Tonics*.

CORROSIVE (Latin *corrodo*, to cut away). See *Caustics*, *Escharotics*.

CORROSIVE SUBLIMATE is the common name of the oxymuriate, or as it is now called, the Bichloride of Mercury, one of the most corrosive of metallic poisons. See *Mercury*.

CORRUGATOR SUPERCILII (Latin *corrugo*, to wrinkle). A muscle which draws the skin of the brow into wrinkles.

CORTEX (Latin for *Bark*, which see). Not only is this term applied to the Cinchona bark, but also to the outer coverings of all trees and plants of woody fibre, many of which possess medicinal properties; thus we have *Cortex Alstiniae*, the bark of the *Alstinia Scholaris*, of the natural order *Apocynae*, an aromatic astringent bitter, which has been found useful in bowel complaints; and *Cortex Brasiliensis*, also astringent, and sometimes used in hæmorrhages and other internal diseases: neither of these are common remedies.

From the above root we have also *Cortisine*, an alkaloid found in the bark of the *Populus tremulus* and some other trees; and *Cortical substance* the exterior covering of the brain and kidneys.

CORYDALIN. An alkaloid found in the root of the *Corydalis tuberosa* and some other plants.

CORYZA (Greek *kara* or *karys*, the head, and *zeo* to boil). Applied to a cold in the head, which affects the eyes, nostrils, &c. See *Catarrh*.

COSMETIC (Greek *kosmos*, ornament). An external application to the skin, applied for the purpose of removing spots and freckles and improving the complexion. It may be innoxious such as Elder-flower, Rose or Hungary-Water; but most of the cosmetics employed are of a deleterious nature, and ultimately, if not immediately, prove injurious to the tissues of the skin, and by their absorption affect the general health. The basis of most of them is some preparation of Arsenic, Bismuth, Lead, or Mercury, and all of these act as poisons when introduced into the system in undue quantities. The Pearl Powder, so commonly used for filling up wrinkles and whitening the skin, is usually composed of Magistery of Bismuth, and French Chalk, in about equal proportions. If white paint of any kind is used, let it be the latter alone, ground to an impalpable powder; with this a very small quantity of Carmine should be mixed, or the unnatural white alone, however pearly it may seem desirable to make the skin appear, has a ghastly effect, and where the deeper tints are laid on there is great danger that the face will assume a

streaky appearance at the slightest perspiration or exposure to a damp atmosphere; indeed, ladies who paint should avoid all active exertion, they may look pretty by gaslight, but they must not let the sun shine on their artificial faces; neither must they enter at all keenly into the pleasures of the festive scene which they have made themselves up to adorn. There can be no doubt that those who habitually use the paints generally sold for the face, render the skin of the parts to which the application is made, unfit for the purposes for which the delicate tissues were intended. If they employ any metallic preparations, the danger of absorption will be considerably lessened if the pores are first well saturated with some unctuous substance; this, too, will render the skin less likely to shrivel up and peel off, or become covered with blotches; nothing is so good for this purpose as *Cold Cream* (which see).

If Pearl Powder is used as a cosmetic, no onions must be taken by the lady who employs it, nor any preparation thereof brought near her, or her face may, perhaps, change to a dark lead colour; some other substances have also this effect.

Of fluid cosmetics, Rowland's Kalydor and Gowland's Lotion are the most popular; the composition of both appears to be pretty much the same, viz. 1 ounce of Blanched Bitter Almonds, rubbed down with 16 ounces of Rose Water; strain, and add 8 grains of Corrosive Sublimate.

A very pleasant and innocent application for a rough and freckly skin is *Milk of Roses* made as follows:—Bitter Almonds 6 drachms, Sweet Almonds 12 drachms, blanch and beat up in a mortar with 1 drachm of Castile Soap; then add gradually 15 grains of Spermaceti, 30 grains of White Wax, and 1 drachm of Almond Oil, previously melted together. When these ingredients are thoroughly mixed, add 6 drops of Otto of Roses, melted in 6 ounces of Rose Water, and afterwards 14 ounces of Distilled Water. A less expensive and more easily prepared kind may be made thus: put into a 6 ounce bottle, 1 ounce of Oil of Almonds with 10 grains of Prepared Kali (Subcarbonate of Potash), shake well, and add 1 drachm of Essence of Bergamot, 2 drachms of Orange or Elder-flower Water, mix, and fill up with Rose Water. For a simple cooling application, simply Rose or Elder-flower Water, with a few grains of Sugar of Lead, may be used; this will be found serviceable in all irritable and inflamed states of the skin from heat, insect bites, and stings, or other causes.

It has been well said that the best cosmetic is a good temper; this, with cleanliness and obedience to the laws of nature and of health, will make a face more pleasant to look upon than all the artificial aids of paint, pomatum, kalydors, and lotions; better to see a few freckles and personal blemishes, than to mark the result of efforts to hide natural defects, which, after all, can be but partially successful, and which, however well intentioned, impress one with a painful sense of an attempted imposition. The fairer half of creation owe it both to themselves, and those whom they desire to please, to dress and to look as well as they can; but let them not, in advancing age, imitate the roseate bloom and spotless beauty of early womanhood, nor present a false face to the world; the admiration, and love, and esteem, which is worth having, is not worn by a blooming cheek and a pearly skin. We admire a "painted lady" as a picture, and as a butterfly; but in neither one nor other of these, can we obtain that which satisfies our longing for heart-communion, for domestic happiness, for companionship and help in the great struggle of life. Our fair readers may depend upon it that the habitual use of Cosmetics, except those of the most simple and innocent kind, which may be perfectly allowable, is always detrimental to health, and never productive of lasting pleasure, or advantage of any kind. See *Health, Skin*.

COSTA (Latin *custodio* to guard; plural *costæ*). A term applied to the ribs, because they act as a defence to some of the most important internal organs. See *Ribs*.

COSTIVENESS. The state of being confined in the bowels. See *Constipation*.

COTYLEDON UMBILICUS (Greek *kotyle*, a cavity, and Latin *umbilicus*, the navel). A plant called the Navel Wort, the expressed Juice and the Extract of which have obtained some reputation for the cure of Epilepsy; dose of the Extract, from $\frac{1}{2}$ a drachm to a drachm twice a-day; of the fresh Juice, from 1 to 2 ounces. This Greek root, *cotyle*, is applied to the socket of the hip-bone; and from it we have also *Cotylod*, the acetabulum, or cavity for receiving the end of the thigh-bone, resembling an ancient cup, sometimes called the *os innominata*; and *Cotyledons*, glands in some animals, disposed over the *chorion* (which see); the term is also applied to the seed lobes of plants.

COUCHING. An operation performed on the eye in *Cataract* (which see), being a depression, or removal, of the diseased and opaque lens to another part of the eyeball,

and thus carrying it out of the axis of vision. See *Eye*.

COUGH. A convulsive effort of the lungs to get relief of phlegm or other matter; it may be a symptom of *Bronchitis*, or *Catarrh*, or *Croup*, or *Influenza*, or *Laryngitis*, or *Phthisis*, or *Pleurisy*, or *Pneumonia*, or *Relaxed Uvula* (all of which see), also *Hoooping Cough*.

We can here lay down but a few general principles with regard to the treatment of simple cough without reference to the peculiar disease of which it may be symptomatic; and first let us observe, that it may be either what is properly, as well as medically termed *dry* or *moist*. In the former case, Opium and its preparations, are advisable, in the latter they should not be used; the irritation will be best allayed by Henbane or Hemlock, either the Tincture or Extract, with demulcents, as Barley Water, Linseed-tea, &c., and Liquorice, either the Root boiled, or Extract; it is well also to add from 5 to 10 drops of Ipecacuanha Wine to each dose; inhalation also of the steam from boiling water will generally be found beneficial—and especially if some medicinal herb, such as Horehound or Coltsfoot, be infused in it. In moist coughs, there should not be so much fluid taken, and the use of demulcents must be somewhat restricted. Opiates may be administered, but not too freely, either separately, or in cough mixtures: Paregoric Elixir, in which the Opium is combined with Benzoic Acid and Oil of Aniseed (expectorants), and Camphor (anti-spasmodic), is perhaps the best form of administration; a teaspoonful in a glass of water, generally allays the irritation, and frequent desire to cough which arises from it. In cases where there is difficulty of expectoration, some such mixture as this should be taken:—Compound Tincture of Camphor, 4 drachms; Ipecacuanha Wine, and Oxymel of Squills, of each 2 drachms; Mucilage of Acacia, 1 ounce; Water, 4 ounces, mix and take a tablespoonful when the cough is troublesome; for old people, 2 drachms of Tincture of Benzoin, commonly called Friar's Balsam, may be added to the above; and if there should be much fever, 2 drachms of Sweet Spirits of Nitre. For all kinds of cough, counter irritants should be applied, such as blisters and warm plasters, rubbing in of stimulant ointments, on the chest and between the shoulders; those parts also should be well protected by flannels next the skin, dressed hair-skin, and other contrivances of the kind. For coughs which are more particularly troublesome by night, it is best to give the Opium, Henbane, or

Hemlock, as the case may be, at bed time, in the shape of a pill; of the Extracts of either of the latter, 5 grains may be given; of the first, 1 or 2 grains of the Gum, or $\frac{1}{4}$ of a grain of Morphine. A long experience of their efficacy among a large number of dispensary patients enables the author to recommend with confidence the following pills:—take of Compound Squill Pill, 1 drachm; Ipecacuanha Powder and Extract of Hyoscyamus, of each, $\frac{1}{2}$ a drachm; mix and make into 24 pills, take one or two on going to rest.

It is a common saying—"feed a cough and starve a fever"—but very frequently febrile symptoms accompany Coughs, and then a full diet is not advisable, and stimulants must be avoided. Great relief is frequently afforded by the use of the warm foot bath, and warm gruel, with a 10 grain Dover's Powder after the patient is in bed; then plenty of covering to encourage perspiration. Coughs should never be neglected, they are so frequently symptomatic of organic disease; if they do not yield to simple remedies, let medical advice be sought, whether the patient be old or young. See *Colds, &c.*

COUNTENANCE. Tolerably clear indications of a person's state of health may generally be read in the expression of the Countenance; where there is great anxiety depicted on this dial plate of the internal organs, there is likely to be functional or organic disease of the heart, pneumonia, bronchitis, laryngitis, croup, chronic consumption, dropsy of the chest, causing a sense of oppression and impeded respiration. In fevers, and other acute forms of disease which shorten life, there is also this anxious expression, as well as in melancholia, hypochondriasis, and to some extent in low forms of mania.

When the countenance is livid and tinged with blood, there is impeded respiration and circulation, probably congestion of the brain; this is the case in apoplexy, disease of the heart, effusion of the lungs, &c. A pale countenance is a sign of fainting, of anæmia, and hæmorrhage, external or internal. When the expression is violent and excited, there is probably the delirium of fever, inflammation of the brain, mania, or delirium tremens. In paralysis, convulsions, epilepsy, hysteria, and chorea, we have a distorted countenance; and a flushed one is symptomatic of fever in general, and of the early stage of delirium tremens. Sometimes, in the latter stage of an incurable disease, the face becomes what nurses call "struck with death," and to this hopeless corpse-

like expression has been applied the term *Facies Hippocratica*, because it has been vividly pictured by Hippocrates himself; here is his picture: "The forehead wrinkled and dry, the eye sunken, the nose pointed and bordered with a dark or violet circle; the temples sunken, hollow, and retired; the ears sticking up, the lips hanging down, the cheeks sunken, the chin wrinkled and hard, the colour of the skin leaden or violet; the hair of the nose and the eyelashes sprinkled with a yellowish white dust." See *Face*.

COUNTER (Latin *contra*, against). From this root we have the terms *Counter-extension* (see *Fracture*); *Counter-irritation*, the effect of a blister, liniment, cautery, &c., applied over any diseased part; *Counter-opening*, a second opening made in an abscess opposite the first: from hence also we have *Contra-fissure*, and *Contra-coup*, with some other phrases used in medicine and surgery.

COUP DE SOLEIL (French for a stroke of the sun). An affection of the brain produced by the sun's rays striking upon the head. This but seldom occurs, except in very hot countries; the first effect is often a sudden fit of insensibility, the patient falls to the ground, and lies there motionless: in this case wet cloths should at once be applied to the head, and if possible, some Brandy and water, or Spirits of Ammonia, in water, should be got down his throat. If there is a full pulse and laboured breathing, application should be had to the lancet, the blood to be taken from the arm, or temporal artery. There may be a complete or only partial recovery from the infliction; sometimes the brain is permanently affected, and lunacy is the consequence; but even when the recovery appears to be perfect, the sufferer should be extremely careful not to expose himself to the like danger. See *Brain, Hurt*.

COUPEROSE (Latin *cuprum*, copper, and *rosa*, a rose). A carbuncled face, so called on account of the redness of the spots. See *Acne, Gutta Rosacea*.

Cow Pock. It has been long known that cows are liable to a pustular eruption on their ureters, which is communicable to the hands or arms which come in contact with them in the process of milking; it was found that ulceration, and some degree of fever ensued; and, after a time, it was also noted that those who had this "Cow Pock," as it was called, in nearly all cases escaped the ravages of the *Small Pox* (which see). The result of these observations, was the practice introduced by Dr. Jenner, of inoculating with virus, taken from the pustules

of the cow, or some human subject to whom the disease had been communicated, the arms of healthy persons, and so, by giving the slight and far less dangerous disease, protect them against that fearful malady, which, in its periodic visitations, had swept off hundreds of thousands, and permanently disfigured as many more.

The Cow Pock eruption assumes the form of a circular vesicle of a livid appearance, having the edges more elevated than the centre, and distended with a limpid fluid, which soon escapes, when the vesicle dries up, and, after a short time, comes away, leaving a little hollow in the skin neither very deep nor permanent. There is little or no constitutional derangement, and unless there are febrile symptoms, medicines generally are not required. For the mode of communicating this disease, see *Inoculation*, *Vaccination*.

COWHAGE or **COWITCH**. The stiff hairs which cover the pods, or seed vessels of the *Dolichus Pruriens*, a plant of the order *Leguminosæ*, have been found efficacious in dislodging intestinal worms, particularly the species called *lumbrici*, resembling earth



worms; the dose is from 5 to 10 grains, or more, on going to bed, and again the first thing in the morning, in Treacle, Honey, or Syrup; continue this for three or four days, and then administer a brisk cathartic, such as Jalap, with a couple of grains of Calomel. See *Vermifuges*.

COXA (Latin for the hip, plural *coxæ*); from which also we have *coxendix*, the hip joint. See *Hip*.

CRAB'S CLAWS (*Canceri cæclæ*). Under this name, and that of Crab's Eyes (*Occuli cancerorum*), or Crab-Stones (*Lapides cancerorum*), a cretaceous preparation was formerly much used as an anti-acid and absorbent; it is still so to some extent, but possesses no qualities which entitle it to a preference over *Prepared Chalk* (which see). It was understood to be the calculous concretions found in the stomach of the Cray fish, or River Lobster (*Cancer asticus*), or the cast shells of the Black-clawed Crab (*Cancer pagurus*).

CRAB YAWS. Excrescences on the soles of the feet. See *Frambæsia*.

CRAMP (German *kremphen*, to contract). An involuntary and painful contraction of the muscles, often causing the most acute pain; the legs and arms are the parts most likely to be affected by it, but especially the former; sometimes it is general, as in cholera affecting the whole muscular system, but most frequently local. Its principal exciting causes are pressure and irritation, arising from the presence of indigestible food in the stomach, or a superabundance of acid in the bowels; pregnant women are much subject to it, and those who have worms; it often accompanies obstructed menstrual discharges, and impeded circulation; when it affects the arms and fingers there is reason to apprehend disease of the heart, or of the large vessels of the chest, and medical advice should be at once sought. Sudden and prolonged cold will often produce general Cramp, depriving the patient of all power of movement; hence it is that bathers, who at one moment are floating buoyantly on the wave full of life and activity, sometimes sink the next, to rise no more until they are brought up by the drag bloated and swollen corpses. If the swimmer is seized by Cramp when in deep water, and far away from help, there is no hope for him; he goes down like a stone, and becomes an easy prey to the whelming waters which surround him.

The best immediate remedy for local Cramp is undoubtedly friction; let the leg, or other part affected, be well rubbed with Soap or Camphor Liniment, mixed with an equal part of Turpentine or Spirit of Hartshorn; sometimes relief may be had by tying a band of some kind tightly round the affected limb between the seat of the pain and the body of the patient; this is a perfectly safe process; not so is the practice of standing upon a cold

hearthstone, from which many find relief; this is likely to strike a chill through the whole system, and occasion permanent injury to the health.

For general cramp, which usually assumes the character of *Spasms*, see *treatment* prescribed under that head. In all cases the bowels should be attended to, and freely evacuated by means of warm stimulating aperients such as the following:—Powdered Rhubarb and Magnesia, of each a drachm; Spirits of Sal Volatile and Tincture of Ginger, of each 2 drachms; Peppermint Water, 6 ounces; mix and take a table-spoonful every three hours until the effect is produced. If there is reason to suspect the presence of worms, take first 2 grains of Calomel mixed with Sugar, and put on the tongue; three hours after 2 drachms of Spirits of Turpentine, and 4 drachms of Castor Oil; or, Oil of Male Fern half a drachm; Mucilage of Acaia, half an ounce; mix and add Peppermint Water, 1 ounce; take half, and repeat the dose in two hours. Where there is obstinate constipation, repeated doses of Castor Oil, floating in some carminative water, should be taken, about a tablespoonful every two or three hours, commencing with the Calomel, as above directed.

CRANIUM (Greek *kara*, the head). The skull or cavity in which the brain with its membranes and vessels is lodged, is so called. See *Head*, *Skull*. From the same root come the terms *Craniology*, a description of the skull, and *Cranioscopy*, an examination of the skull.

CRASSAMENTUM (Latin *crassus*, thick). That portion of the blood called the clot, or eruo, consisting of fibrin and red globules. See *Blood*.

CREAM. The yellowish white fluid which collects upon the surface of milk; its composition approaches very nearly to that of animal fat; it is found in the milk of all animals, the quantity varying considerably, as well as the richness, even in the same animal, according to age, state of health, and nature of food. The *Family Doctor* does not recommend Cream to persons of weak digestion: it is undoubtedly nourishing but apt to disagree; if taken at all, it should be in small quantities; it may sometimes be given with advantage to invalids for whom a milk diet is prescribed, but who cannot take a sufficient quantity; in this case it is best mixed with Arrowroot Mucilage or some farinaceous food. See *Milk*.

CREAM OF TARTAR. A common name for the Bi-tartrate of *Potash* (which see),

CREASOTE, or KREASOTE. Is an oxy-hydro-carburet prepared from Pyroxylic Oil, or Wood Tar: this is an oily-looking fluid of a peculiar odour, which has been used with considerable success in the treatment of various diseases. Applied locally, it is styptic and antiseptic, and may be used with advantage in the form of ointment and lotion as a dressing for foul ulcers, indolent itch, and other skin diseases. Creasote frequently affords immediate relief in toothache; internally, it, sometimes, relieves sea sickness, and allays vomiting, but it must not be given in inflammatory conditions, and structural disease of the stomach: in the vomiting resulting from pregnancy and hysteria it has been found especially useful; the dose is from, to 2 drops, which may be increased to 5, in a wine-glassful of water. The Creasote Mixture of the Pharmacopœia, in which the taste is concealed by Oil of Juniper, is the best form of administration; the dose is from 1 to 2 ounces. We give the form—Creasote and Acetic Acid, of each, 16 minims; Compound Spirit of Juniper and Syrup, of each, 1 ounce; Water, 14 ounces; mix the Creasote with the Acid, then add the Water gradually, and lastly the Syrup and Spirit. As a lotion for inflamed eyelids, and mercurial salivation, a preventive of bed sores, and a variety of other purposes, this substance has been applied successfully.

CREeping SICKNESS. A name applied in Germany to the gangrenous form of *Ergotism* (which see).

CREMASTOR (Greek *kremao*, to suspend). The name of the muscle which draws up the *Testes* (which see).

CREPITATION (Latin *crepito*, to creak). The grating sensation, or noise, occasioned by pressing the finger upon a part affected by *Emphysema* (which see), or by the ends of a fracture when the bones are moved. (See *Fracture*.) Certain salts, also, during calcination, emit this creaking sound. From the same root, or *crepo*, to crackle, comes also

CREPITUS. The peculiar rattle of *Pneumonia* (which see), and the grating noise made by the joints when there is a deficiency of the lubricating fluid.

CREsSES. Various plants, which have acrid or pungent leaves, are so called; they are agreeable, and generally wholesome salads, not well suited, however, for weak stomachs; their good effect in purifying the blood is probably owing to the presence of a small quantity of iodine. The species most commonly eaten are, the Common Cress (*Lepidium Sativum*); the Water

Cress (*Nasturtium Officinale*); the Normandy Cress (*Barbarea Præcox*), and the Indian Cress (*Tropæolum Majus*). See *Salad*.

CRETA (Latin for *Chalk* (which see), and *Lime*).

CRETINISM. Imperfect development of the brain, causing mental imbecility; it is usually combined with bronchele, and chiefly prevails in the valleys of Switzerland. See *Goitre*.

CRIBRIFORMIS (Latin *cribrum*, a sieve, and *forma*, likeness). The plate of the ethmoid bone, so called because it is perforated like a sieve. See *Nose*.

CRICOS (Greek for a ring). Hence we have *cricoid*, the name of the ring-like cartilage of the larynx; and *crico*, the bases of several terms applied to the muscles of the *Larynx* (which see).

CRINIS (Greek for the hair). See *Capillus*.

CRISIS (Greek *krino*, to decide). The decisive period or event of a disease. From the same root comes also *critical*, applied to the symptoms connected with the changes of a disease; by the ancient physicians certain days in the duration of sickness were so designated, and still are, by nurses and old-fashioned practitioners.

CRISTA GALLI (Latin for cock's crest). The cristiform process of the ethmoid bone. See *Nose*.

CROCUS. The stigmas of the *Crocus Sativus*, a plant of the natural order *Iridaceæ*, possess antispasmodic, stimulant, and

CROTCHET. A curved instrument with a sharp hook, used for extracting the *Fœtus* (which see).

CROTON OIL. Expressed from the seeds of the *Croton Tiglii*, a plant of the natural order *Euphorbiaceæ*, which grows in the East and West Indies. Except *Elaterum*, it



is the most powerful of known drastic purgatives: it acts very speedily, when it does act, but this is somewhat uncertain; one of its most marked effects is to increase the flow of urine. In obstinate cases of constipation, dropsy, and in apoplexy and paralysis, where it is desirable that a speedy irritant action on the intestines should be produced, resort is generally had to this oil; and in lock-jaw and mania it is of great advantage; a few drops placed on the tongue will produce catharsis. Externally it is a strong counter-irritant, producing redness, soon followed by pustular eruptions; thus employed it is very useful in inflammation of the chest. *Crotonic Acid* and the alkaloid *Crotonine*, are also procured from the seeds of the above plant.

CROUP. This is an inflammation of the larynx and trachea, causing a difficulty of breathing, and a rough hoarse cough, with a sonorous inspiration of a very peculiar character, sounding as if the air was passing through a metallic tube: it most usually attacks children of from one to three years of age, to whom it sometimes proves fatal; very rarely are adults affected by it. Croup is called by medical men *Cynanche trachealis*; its first symptoms are merely those



emmenagogue properties; but they alone are not much to be depended upon. See *Saffron*.

of a common cold or catarrh; then comes on a dry cough with hoarseness and wheezing; at night there is restlessness and rattling in the throat, after which the croupy crow and sound above spoken of give unmistakeable warning of the disease, which goes on increasing in intensity for a day or two, or perhaps several days, before there is a really alarming paroxysm, which mostly occurs about midnight. The child, after tossing restlessly about, endeavouring in vain to sleep, will start up with a flushed face, protruding eyeballs and a distressing look of terror and anxiety; there is a quick vibrating pulse, and agitation of the whole frame which presently becomes covered with a profuse perspiration: as the struggle for breath proceeds there is clutching of the throat as though to force a passage; the arms are thrown wildly about, the respiration becomes more laboured, the rough cough more frequent, and the characteristic Croup rings out like an alarm note. There is expectoration of viscid matter, but so difficult is it to be got rid of, that the effort appears to threaten strangulation; gradually the symptoms become weaker, and eventually the child falls into the sleep of exhaustion. It will probably wake up refreshed, and during the day may appear pretty well; but at night again, probably there will be a recurrence of the attack with aggravated symptoms, convulsions, spasms of the glottis, causing the head to be violently thrown back, in the effort to obtain a passage for the air through the windpipe; there is a fluttering motion in the nostrils, the face is puffed and of a pale leaden hue; a film comes over the sunken eyes, the pulse becomes feeble and irregular; there are more gasping convulsive efforts to continue the struggle, but in vain, the powers of life at length succumb, and the patient sinks into a drowsy stupor, which ends in death. Such is the frequent course of this painful disease, and the changes from bad to worse are so rapid that there is little time for the operation of remedies, that is, when the paroxysms have begun.

Treatment. Confinement to the house in case of threatened Croup is always advisable, unless the weather should be very warm and open, and then exposure after sundown should be avoided; a dose of Calomel, about 3 grains, should be administered, and followed by nauseating doses of Tartarized Antimony, of which 1 grain may be dissolved in an ounce of Warm Water, and a tea spoonful of the solution given every quarter of an hour, until the effect is produced; should the bowels be confined after

this, give Senna Mixture, or a Scammony Powder. Mustard and Bran Poultices to the throat, Leeches, if the patient is of a full habit, and the breathing is very laboured; and a spare diet are the other remedial measures.

In the paroxysms, the most prompt and vigorous measures must be adopted to give any chance of success: bleeding in such quantity as to diminish the vascular action on the surface of the wind-pipe, and to relax the muscles; strong emetics to cause full vomiting, which often has a most beneficial effect; warm baths, and blisters applied from one ear to the other. Calomel combined with Ipecacuanha Powder, or Tartar Emetic, should be given every four hours or so, and if the danger is extreme, counter irritation by means of Mustard Poultices applied to the calves of the legs, &c. In leeching for Croup, one leech for each year of the child's age is the general rule to be observed, and the best part is over the breast-bone, where pressure can be applied to stop the bleeding if required; over the leech bites, apply a blister should one appear necessary. If the above powders should cause too violent an action on the bowels, add to them a little Chalk with Opium. Should the child appear likely to sink from exhaustion, after vomiting has been produced, stay the emetics, and give Liquor of Acetate of Ammonia 20 drops, with 5 or 10 drops of Sal Volatile, or the same of Brandy in a little water, or Camphor Mixture; a little White Wine Whey may also be administered. Of course, the first endeavour in an attack of Croup should be to obtain medical assistance; but if this cannot be procured, there must be no temporizing, resort at once to the remedies most ready to the hand, using them according to the best knowledge and discretion available. The best resort in desperate cases is the opening of the windpipe (see *Tracheotomy*) and this only a professional hand can attempt: there is but a faint hope of saving life by this means, and the parent's consent should always be obtained before it is tried. Let the contagious nature of Croup be ever borne in mind, and especial care taken to keep apart those affected with it from any other children in the family or house. Let it also be remembered that the great agents in producing it are cold and moisture, and, the greatest of all, the east wind, and that those who have once been attacked by it are peculiarly liable to a recurrence of such attack.

Croup is most likely to be fatal when inflammation commences in the fauces, and

this if discovered in time may be stopped by the application of a Solution of Nitrate of Silver to the whole surface within sight, and to the *Larynx* (which see).

Spasmodic Croup, or Child Crowing, as it is often called, exhibits much the same symptoms as the Croup; it is not, however, of an inflammatory character, but is symptomatic of some other disease commonly coming on as a result of irritation caused by hydrocephalus, teething, worms, &c.; the medical man only can judge of the probable cause, and he will use such remedies as are most applicable to the peculiarity of each case. The following mode of treatment recommended by Dr. Leman, of Torzan, has, we believe been found efficacious in many cases of Croup, it is simple and easy of application. We give the details as furnished by Dr. Graves:—"A sponge, about the size of a large fist, dipped in water as hot as the hand can bear, must be gently squeezed half-dry, and instantly applied under the little sufferer's chin over the larynx and windpipe: when the sponge has been thus held for a few minutes in contact with the skin, its temperature begins to sink; a second sponge, heated in the same way, should be used alternately with the first. A perseverance in this plan during ten or twenty minutes, produces a vivid redness over the whole front of the throat, just as if a strong sinapism had been applied; this redness must not be attended or followed by vesication. In the meantime, the whole system feels the influence of the topical treatment; a warm perspiration breaks out, which should be well encouraged by warm drinks, as Whey, weak Tea, &c., and a notable diminution takes place in the frequency and time of the cough, while the hoarseness almost disappears, and the rough ringing sound of voice subsides, along with the difficulty of breathing and restlessness; in short, all danger is over, and the little patient again falls asleep, and awakes in the morning without any appearance of having recently suffered from so dangerous an attack. I have repeatedly treated the disease on this plan, and with the most uniform success. It is, however, only applicable to the very onset of the disease; but it has the advantage of being simple, efficient, and easily put in practice, and its effects are not productive of the least injury to the constitution."

CRUCIAL (Latin *crux*, a cross). A term in surgery applied to incisions made across each other, and to the crossing ligaments of the knee, &c.

CRUDITIES (Latin *crudus*, raw). Applied

to undigested substances in the stomach. See *Digestion*.

CRUOR. The clot of the blood. See *Crassamentum*.

CRURA (plural of *crus*, a leg). A term applied to some parts of the body because they resemble a leg, or root, such as the *C. Cerebri* and *C. Cerebelli*, parts of the brain. Derived from this root are the terms *Cruræus* and *Cruralis*, applied to the nerves, &c., of the leg, and the latter also to femoral *Hernia* (which see).

CRUSTA (Latin for a shell, or scab). Hence we have *Crusta lactea*, milk scall. See *Porriago*.

CRYOLITE. A preparation of Alumina and Soda, being a double Hydro-fluate of those combined substances; it is seldom ever employed medicinally.

CRYOPHORUS (Greek *kryos*, cold, and *phoro*, to bring). An instrument for exhibiting the degree of cold produced by *Evaporation* (which see).

CRYPTÆ (Greek *krypto*, to hide). Mucous follicles, which are concealed from view).

CRYSTALLI (Greek *krystallos*, ice). A term formerly applied to *Varicella* (which see) on account of the white shining appearance of the little pustules containing lymph. From the same root come also *Crystalline*, applied to the lens of the eye; and *Crystallization*, the process by which liquid or gaseous bodies form themselves in *crystals*, the investigation of the forms and nature of which constitutes the science of *Crystallography*.

CUBIDIS (Greek *kubos*, or cube, and *eidos*, likeness). The name of a cube-shaped bone in the *Foot* (which see).

CUBITIS (Latin *cubo*, to lie down,) applied to the forearm, consisting of the *ulnar* and *radius*, because it was the part on which the ancients rested when they reclined at their meals. See *Arm*.

CUBEBS. Berries of the *Piper Cubebæ*, or Java Pepper, belonging to the natural order *Piperaceæ*, are carminative, stimulant, and diuretic, being, however, inferior in pungency and aromatic warmth to the common Pepper, they fell into disuse; but lately, they have again obtained a prominent place in the materia medica, chiefly as a remedy for gonorrhœa, on which complaint they are said to exert a specific influence, if taken in the early stages. The dose is a dessert spoonful of the powdered Berries three times a-day, in water or some other convenient liquid; the essential Oil is sometimes given, but has not so good an effect.

The dried fruit of the *Rhamnus Catharticus* (see *Buckthorn*), sometimes called Turkey Yellow Berries, are occasionally sub-

stituted for the above, being much like them in appearance; their action, however, is

gourd, or bitter cucumber *C. Colocynthus*. See *Colocynth*.



very different, being chiefly cathartic, and therefore in many cases mischievous.

CUCULLARIS (Latin *cucullus*, a hood). A broad hood-like muscle of the *Scapula* (which see).

CUCURBITULA (Latin *cucurbitio*, a gourd), applied to a cupping-glass. See *Cupping*.

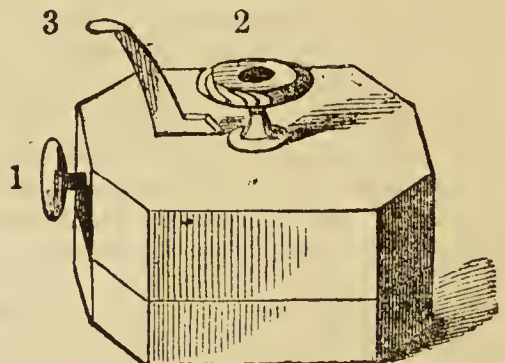
CUMIN SEED. The produce of the *Cuminum* *Cyminum*, natural order, *Umbelliferae*; medical properties, carminative and stomachic; seldom used, however, except as an ingredient in stimulating plaisters: when taken, the dose is from 10 to 30 grains; the seeds yield an essential oil. It appears that the ancients entertained a notion, that drinking, or washing with an infusion of Cumin, or smoking it, produced paleness of the visage; Dioscorides alludes to the belief, and Pliny informs us that the disciples of Portius Latro, a celebrated teacher of oratory, were reported to have used Cumin that they might look as pale as their studious master; Horace also, in his 19th Epistle, lib. 1, lin. 18, alludes to the belief.

CUNEIFORM (Latin *cuneus* a wedge, and *forma*, likeness). Applied to the wedge-like bones of the foot, termed the inner, middle, and outer *cuneiforms*. See *Foot*.

CUCUMIS (Latin for a cucumber). A genus of plants of the order *Cucurbitaceae*. Among them we find the squirting cucumber *C. Agrestis* (See *Elaterum*), and the Colocynth



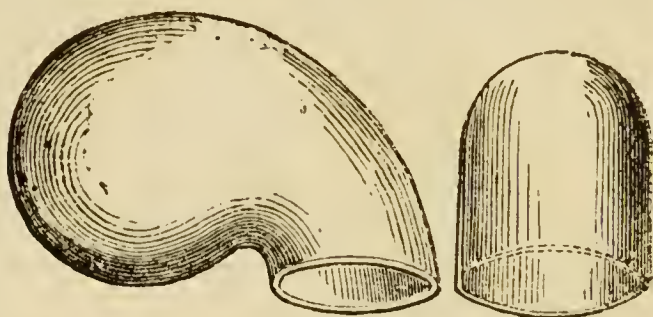
CUPPING. The abstraction of blood by means of the cupping-glass, in which a partial vacuum has been produced by the application of heat within, causing the air to expand; this, as it cools, condenses again, and so draws up the skin of the part to which the glass is applied, and causes the blood to flow through the openings made by the concealed lancets of the instrument here represented, called a *scarificator*, which is a



metal case containing several lancets (ten or twelve is the general number) of semi-circular form, which, when set, on the

pressure of a spring (1) revolve rapidly on an axis, and protruding through slits in the bottom of the ease, make so many clean cuts with very little pain to the person operated on; the depth of these cuts can be regulated by a screw (2), according as the judgment of the operator directs; the setting of the instrument is effected by means of a trigger (3). Cupping, although it requires a quick and practised hand to do it expertly, and with perfect success, is frequently performed as a purely domestic operation, nor can there be any objection to this, provided that the desirability of extracting blood from any particular part of the frame is first clearly ascertained. The mode of operation is this:—Let the part to be operated upon, most frequently the neck, the back, or the loins, be bared, and the patient placed in a convenient position—one which can be maintained for a considerable space of time. First apply to the part a sponge, or a flannel dipped in hot water, to excite a quicker circulation; then take a cupping-glass—one of several previously placed at hand—into which has been put a small piece of paper saturated with Spirits of Wine; place one edge of the glass on the skin of the patient, ignite the spirit by the introduction of a match or screw of paper, and immediately press the glass closely down; it will adhere by the power of suction until the air is admitted by the insertion of a finger-nail beneath the edge. Fix two or three glasses in this way; then remove them; and, to the centre of each swelling of the skin which they raise, apply the scarificator, pressing it closely down each time, and causing the lancets to make incisions by the means already described; do this rapidly, and again affix the glasses, charged with spirit; if this is properly done the blood will flow rapidly into them; and when half-filled, or more, they should be removed, the cuts sponged with warm water, to clear them from coagulated blood, and fresh glasses applied, continuing in this way until the necessary quantity of blood is abstracted; this may be from 6 to 12 ounces, according to circumstances, but 8 or 10 ounces is the usual quantity. If the blood does not flow freely, or, as is sometimes the case, ceases after a short time to flow at all, a removal of the glasses, and warm sponging, must be tried; if this is not effectual, cross cuttings with the scarificator should be made, or fresh incisions on a part more favourable for the operation; this should not be where there is much fat or muscle, nor where the surface is very uneven or covered with hairs, as in neither case can the glass fix sufficiently

close to exclude the air. None but a very dexterous copper should operate on a part where the skin is at all thin, as on the temple, where nice judgment and delicate manipulation is required; but to proceed with our directions:—Having taken the requisite quantity of blood, and removed the glasses, which may be done without spilling any of the fluid, if, simultaneously with the lifting the upper edge of the glass, a sponge or flannel is passed rapidly over the surface, so as to sweep the blood into the vessel; cleanse the incisions, and then apply over them strips of Soap or Adhesive plaster; the bleeding ceases immediately, and the cuts generally heal in a few days without pain or annoyance of any kind. Cupping glasses are of various shapes and sizes: we have figured two, the smaller being the favourite



with modern practitioners, although the other, which is called the leech cupping-glass, is perhaps the best for an unpractised hand, as it is most easily removed without spilling the blood, and is not so likely, by coagulation over the cuts, to stop the flow, and to necessitate a frequent removal. Spirit lamps and torches, and other contrivances for rarifying the air in the glasses are used, but the simple plan above described is the easiest and the best. A glass, to the top of which an air-pump is affixed, has recently been introduced, and this is the best of all methods: but the instrument is expensive, and therefore scarcely available for household practice.

The process of extracting blood by cupping was practised by the ancients, and some barbarous nations still perform it in a very primitive way. Incisions are made by means of a sharp flint or knife, and over these is applied a cow's horn with the top removed, to the aperture of which the operator applies his mouth, and literally sucks the blood of his patient. The operation as now performed is safer for the unqualified practitioner than either leeching or bleeding; and it frequently affords very speedy relief in inflammatory and some other diseases. See *Depletion*, *Inflammation*, &c.

CUPRUM (Latin for *Copper*, which see).

CURCUMA (Latin for *Turmeric*, which see).

CURD. The coagulum which separates from milk upon the addition of acid, rennet, or wine. See *Cheese*.

CURRENTS. The produce of two species of *Ribes*, much and deservedly esteemed for their grateful acidulous flavour, and wholesome qualities. During the hottest part of the English year, when they are in the greatest perfection, they serve to quench the thirst, and lessen the tendency to bilious attacks, which are most likely to occur at this season; they are slightly laxative, owing probably to the mechanical action of the seeds on the bowels. From cultivated varieties of *C. Rubrum* we obtain both red and white currants; the *C. Nigrum* yields the black currants, which have a more astringent taste than the other kinds, and are somewhat aromatic; preserved as jam, they are very useful in colds, coughs, and fevers; an infusion is sometimes made of the leaves, which have diuretic properties.

Grocer's currants are misnamed, being a kind of grape, cultivated chiefly in the Levant. This fruit is sometimes used as a diuretic aperient, chiefly after childbirth, and, in combination with gruel; its action is no doubt mechanical.

CURRY POWDER. This favourite condiment with those who luxuriate in rich and savory viands, and require constant stimulus for the digestive organs, is usually composed of Cayenne and Black Peppers, Mustard, Ginger, and other spices, with Turmeric for colouring matter. To give pungency and flavour, and the necessary stimulating power to the rice and other vegetable food of hot climates, it is very well; but is seldom required as an addition to animal diet: when taken at all in this country it should be very sparingly, and where there is a tendency to irritability of the stomach and bowels, to excess of bile, or any affection of the head, it is better avoided altogether.

CUSPARIA. See *Angustura*.

CUSPIDATI (Latin *cuspidis*, a point). The canine or eye *Teeth* (which see).

CUT. A gash or incision made by an edged instrument. See *Wound*.

CUT THROAT. In an emergency of this kind, few unprofessional persons would have the presence of mind to adopt the proper remedial means, even if they possessed the requisite knowledge, and the skill to apply it. The danger to be apprehended is death from hæmorrhage; or, if the wound is sufficiently deep to open the windpipe, from suffocation, from an influx of blood into the passage; in the latter case, any pressure upon the part would but hasten the crisis;

but, if the windpipe is not deeply wounded, this may be applied. Should there be a gushing out of dark blood, showing that a superficial vein is wounded, place the fingers on the course of the vein, a little above the cut, between it and the head, and keep a firm, though gentle, even pressure there. If there is bright red blood coming forth in jets, an attempt should be made to tie the divided arteries, for it would be impossible to apply a sufficient amount of pressure to stop the bleeding. For directions, (see *Arteries*.) It is possible that the windpipe may be severed without bleeding to such an amount as to cause death. In this case, place the patient on his face, or on one side, with the neck bent forward, so that the blood will naturally take an outward direction; when it has stopped, do not at once close the wound, but put a piece of cambric lightly over it, and, at the end of three or four hours, stitch it up. See *Wound*.

CUTICLE, diminutive of **CUTIS** (Latin for *skin*, which see): from the same root comes *Cutaneous*, belonging to the skin; and *C. musculus*, a name for the muscular expansion which extends over the face. See *Platysma Myoides*.

CUVETTE (French). An instrument shaped like a spoon, used for the extraction of the cataract. See *Eye*.

CYANOGEN (Greek *kyanos*, blue; and *gennao*, to generate). A name given to Bicaruret of Nitrogen, an essential ingredient in Prussian Blue: it is a gas which, in combination with oxygen, forms Cyanic, Cyanous, and Fulminic acids; and with nitrogen, *Hydrocyanic*, or *Prussic Acid*, (which see); also *Cyanides* and *Cyanurets*, as all the compounds of this gas are called which are not acids.

CYANOSIS (from the same root), sometimes called *Morbus Cæruleus*, a blue disease. This is the Blue Jaundice of the ancients; those affected by it have their complexion tinged with venous blood, owing to some malformation of the *Heart* (which see).

CYATHUS (Greek *kyathos*, a drinking cup,) now applied to a wineglass; when ordered in prescriptions, about 3 table-spoonsful, or an ounce and a half, is meant.

CYDER. The fermented juice of apples, much used in some parts of England as a common drink; it is more wholesome than beer, containing but little alcohol, not above nine per cent. Malic acid is its characteristic principle. The dry bellyache resembling painters' colic, which prevails at times in Cyder districts, is thought to pro-

ceed from an impregnation of lead; that metal which readily combines with the above-named acid, being sometimes employed in the manufacture of cyder-vats. See *Diet*.

CYDONIUM, from *Cydonia*, a town in Crete, celebrated for the growth of Quince-trees. See *Quince*.

CYNANCHE (Greek *kyon*, a dog; and *aycho*, to strangle). A term applied to various affections of the *Throat* (which see). Thus we have *C. maligna*, ulcerated or sloughing Quinsy; *C. tonsillaris prunella*, simple Quinsy; *C. parotidæa*, Mumps; *C. pharyngea*; and *C. laryngea*, or *Trachealis*, Croup (all of which see).

CYNARIA. The scientific name of the Artichoke, the leaves of the common species of which yield a bitter juice, which is diuretic, and was formerly given in dropsical complaints. In the form of Extract, it has been found to give speedy relief in some cases of rheumatism, or gout, and sciatica, the dose being from 2 or 3 grains—some say 5—three times a day. Its administration should be preceded by a purgative, and such a dose of the Extract should be given as will move the bowels. There is a Tincture of Cynaria but it is scarcely active enough of itself. It may be given in conjunction with the Extract.

Hydrophobia.) From the same root comes also *Cynorexia*, canine appetite; and *Cynobatus*, a name for the canine or dog rose.

CYPRUS POWDER. A French cosmetic, prepared from the acrid *Arum* (which see).

CYSTUS (Greek *kystos*, a bladder) whence we have the medical terms *Cystic Duct*, the passage leading from the gall bladder; *Cystic Oxide*, a species of calculus found in the bladder; *Cystorrhagia*, hæmorrhage from the urinary bladder; *Cystorrhea*, catarrh of the bladder; *Cystitis*, inflammation of the bladder; *Cystitome*, an instrument for opening the crystalline lens; *Cystocèle*, a kind of hernia formed by protrusion of the bladder; *Cystotomia*, the operation of opening the bladder for the extraction of a calculus. See *Lithotomy*, &c.

CYTISINE. An alkali, discovered in the seeds of the *Cytisus Laburnum*, or Pea-tree of our shrubberies, and also in the *Asarabacca*



and *Arnica*, or *Leopards-bane*; it is bitter, and possesses emetic properties, but has not hitherto been employed medicinally to any useful extent.

DACRYOMA (Greek *dakryo*, to weep). A state or condition of the eye in which one or both of the external openings of the lachrymal ducts are closed. See *Eye*.

DAFFY'S ELIXIR. This is still a favourite quack medicine, although not so much used now as formerly; it is very similar to the Compound Tincture of Senna; but different makers vary the preparation considerably. The following is the recipe given for Dicey's "Daffy," which has, perhaps, been more extensively used than any other:—Senna leaves, 5 ounces; Guaiacum shavings, dried Elecampane Root, Aniseeds, Corian-



CYNOLYSSA (Greek *kyon*, a dog; and *lyssa*, madness). Canine madness. (See

ders, Caraways, and Liquorice Root, and, according to some, red Sanders wood, of each $2\frac{1}{2}$ ounces; stoned Raisins, 8 ounces; Proof Spirit, 6 lbs.: macerate for a fortnight and filter. This is an excellent family aperient, acting generally with tolerable quickness and certainty; the quantity of spirit which it contains renders it objectionable for children; and it should not be given in cases where there is a tendency to inflammation. The dose for an adult is from 2 to 3 table-spoonfuls. See *Senna*.

DALBY'S CARMINATIVE. Dr. Paris gives, as a formula for the preparation of this celebrated quack medicine, the following:—Carbonate of Magnesia, 2 scruples; Oil of Peppermint, 1 drop; of Nutmeg, 2 drops; of Aniseed, 3 drops; Tincture of Castor, 30 drops; of Assafoetida, 15; of Opium, 5; of Cardamums (compound), 30 drops; Spirit of Pennyroyal, 15 drops; Peppermint Water, 2 ounces. The great objection to the use of this otherwise excellent Carminative is the Opium which it contains; for this is a drug which should never be given to the young, unless under medical sanction and supervision. The above formula contains, we see, 5 drops to 2 ounces; but every druggist makes his own "Dalby" according to his own particular form; and in many of the formula there is no doubt a much larger proportion of the objectionable drug; indeed, the stronger he makes it in this respect the greater satisfaction will be given to his customers, whose object is to "still" their fretful infants. Leave out the Laudanum, and no better Carminative could be administered than the above; leave it in, and we must denounce "Dalby's" as a dangerous nostrum, whose frequent and habitual use, although it saves mothers present trouble, entails upon them future sorrow and anxiety, by making their children grow up puny and sickly, if it does not produce mental imbecility.

DAMSON, or DAMASCENE. A kind of plum, very hardy and prolific, therefore cultivated extensively in this country; this well-known fruit is slightly aperient, and, when ripe, is very wholesome; it should not be eaten by invalids, unless boiled or otherwise cooked. See *Fruit*.

DANDELION (French *Dent-de-Lion*, or Lion's tooth). A common plant of the fields in this country, belonging to the natural order *Compositæ*, whose botanical name is *Taraxacum dens Leonis*; it possesses tonic, alterative, diaphoretic, and diuretic properties, and has long enjoyed the reputation of being beneficial in obstructions of the liver, and in visceral diseases; its action

appears to be somewhat like that of *Sarsaparilla*, and it is often given in dyspepsia, dropsy, skin disease, and cachectic disorders generally. Being easily procured, and of well established repute, it is one of the plants most frequently used by country people for the cure of their ailments: a decoction is made of the fresh root sliced, about an ounce of which is put into a pint of water, this is boiled down to half a-pint, and strained; add to this quantity 2 drachms of Cream of Tartar, and take a wineglassful twice or thrice a-day. Surgeons most commonly order the Extract, which is prepared by first obtaining the juice from the fresh root by pressure, and then evaporating until it is somewhat thicker than treacle; the dose of this is from 10 grains to $\frac{1}{2}$ a-drachm; it is frequently given in combination with stronger diuretics in disease of the urinary organs. The following is a good form of combination for chronic affection of the liver:—Extract of *Taraxacum*, 4 drachms; Carbonate of Soda, 1 drachm; Spirit of Sulphuric Ether, 2 drachms; Syrup of Orange Peel, $\frac{1}{2}$ an ounce; Infusion of Gentian sufficient to make up 8 ounces; two table-spoonfuls to be taken twice a-day with a $2\frac{1}{2}$ grain Blue Pill, or a 5 grain Plummer's Pills every night for the first week, then every other night.

In some parts of Germany, the poorer people roast the Dandelion roots, and take the decoction of these for coffee. The leaves, also, are very commonly used on the Continent as a salad; they are no doubt very wholesome thus taken, and, to some constitutions, beneficial; by these leaves the plant may be easily distinguished, when not in flower, from their deeply indented shape, from whence they obtain the name "Lion's Tooth." See *Taraxacum*.

DAPHNE. The name of a genus of plants, to which belong the Flax-leaved Daphne, or Garou Bush (*D. Gnidium*), the seeds and bark of which are acrid and poisonous, although the former are occasionally used by the French as purgatives; and the Spurge Laurel (*D. Laureola*), the berries of which are sometimes used in the form of a tincture to make blisters, and of an ointment to keep them open.

DAPHNE MEZEREON. The Spurge Olive, which yields the Mezereon Bark used medicinally; its active principle is called Daphnin, it is procured by macerating the bark in alcohol. See *Mezereon*.

DARTOS (Greek *dero*, to excoriate). The rough or corrugated part of the *Scrotum* (which see).

DARTRE (Greek *dartos*, a crust or shell).

This is a term which has been used at different times to designate nearly all *Skin diseases* (which see), also *Tetter*, to which it more properly belongs.

DATE. The fruit of the Date Palm, which constitutes a considerable portion of the food of Egypt, Northern Africa, Arabia, and Persia; it contains a large quantity of sugar, in which its nutritive property consists. The dried dates which we have in this country are too indigestible to be quite wholesome.

DATURA STRAMONIUM. The Thorn Apple (see *Stramonium*); its narcotic principle is called *Daturine*.

DAYMARE (*Ephialtes Vigilantium*). A kind of incubus, the result of indigestion, occurring during the day, and attended with that severe pressure on the chest which is a characteristic of *Night-mare* (which see).

DAY SIGHT. An affection of the vision, sometimes called *Nyctalopia*, or Night-blindness, because the sight is dull and confused at night, but clear and strong in the daylight. Another name for it is Hen-blindness, because the sight of hens is known frequently to be so affected. See *Sight*.

DEAFNESS may proceed from any injury inflicted on the delicate organs of the ear by loud noises, violent colds, inflammation or ulceration of the membrane of the auditory passages; hard wax, or other substances interrupting the transmission of sounds; either over dryness, or excessive moisture in the parts; want of tone in the general system from debility: among one of its frequent causes, is some defect in the structure of the organ itself, which no medical treatment can obviate; in this case there is generally dumbness as well.

The *treatment* will depend to a considerable extent on the cause; if there is an accumulation of hardened wax, or any defective or diseased action in the secreting glands of that substance, a few drops of a saturated solution of Common Salt, or of Ox Gall and Balsam of Tolu, one part of the former to three of the latter, may be dropped into the ear, while the head is held on one side, night and morning; or applied on a piece of wadding inserted by means of a probe; before each application, the ear should be syringed out with warm milk and water, or soap and water. If there is a thin acrid discharge accompanying the deafness, apply a blister behind the ear and keep it open for some time with Savine Ointment. When deafness proceeds from cold in the head, diaphoretics, the warm foot bath, and flannel wrappers must be the

remedies; if from debility and consequent loss of tone, drop stimulants into the ear, electrify or galvanize, and give tonics; this will be the treatment also, if it proceeds from defective energy of the optic nerve. See *Ear, Hearing*.

DEBILITY (Latin *debilis*, weak). See *Weakness*.

DECIDUA (Latin *decido*, to fall off). A membrane thrown off from the uterus after parturition. (See *Caduca*.) From the same root comes the term *Decidua reflexa*, a flocculent layer, forming parts of the aperture of the *Ovum* (which see).

DECOCTION (Latin *decoquo*, to boil away). This term may apply to the operation of boiling, or to the fluid when boiled, and containing, in solution, the active principles of the drugs, generally vegetables, subjected to the process. The following are the decoctions contained in the London, Edinburgh, and Dublin Pharmacopœias:—*Decoctum Altheæ* (of Marsh Mallows), demulcent and emollient; dose 1 ounce to 2 ounces. *D. Aloes Comp.*, gently cathartic and emmenagogue; $\frac{1}{2}$ an ounce to an ounce. *D. Anthemidis* (Camomile), tonic and stomachic; a wineglassful. *D. Cetrariæ* (Iceland Moss), tonic and demulcent; $\frac{1}{2}$ an ounce to 2 ounces. *D. Chimaphilæ* (Winter Green), diuretic; 1 ounce to $1\frac{1}{2}$ ounce. *D. Cinchonæ* (Bark), tonic and febrifuge; 1 ounce to 4 ounces. *D. Cydoniæ* (Quince Seed), demulcent; a wineglassful. *D. Daphnes Mezerei* (Mezereon), stimulant, diaphoretic, and alterative; $\frac{1}{2}$ an ounce to an ounce. *D. Dulcamaræ* (Woody Nightshade), diuretic and diaphoretic; $\frac{1}{2}$ an ounce to an ounce. *D. Gallæ* (Galls), astringent; two table-spoonfuls. *D. Geoffræ Inferæmis* (Cabbage Tree Bark), anthelmintic, purgative, and narcotic; 2 drachms for children, adults $\frac{1}{2}$ an ounce to 2 ounces. *D. Granati* (Pomegranate Rind or Root), astringent, anthelmintic. *D. Glycyrrhizæ* (Liquorice), demulcent; a wineglassful. *D. Guaiaci* (Guaiacum), stimulant, and diaphoretic; 3 or 4 ounces. *D. Hæmatoxyli* (Logwood), tonic and astringent; 1 to 2 ounces. *D. Hordei* (Barley), nutritive, demulcent, slightly laxative, any quantity. *D. Myrrhæ* (Myrrh), expectorant, astringent; 1 to 2 ounces. *D. Papaveris* (Poppy), anodyne, emollient; $\frac{1}{2}$ an ounce to an ounce. *D. Pareiræ* (Pareira Root), diuretic and astringent; 1 to 3 ounces. *D. Pyrolæ* (Winter Green), diuretic and tonic; 1 to 2 ounces. *D. Quercus* (Oak Bark), astringent, chiefly used as a gargle or injection. *D. Sarzæ* (Sarsaparilla), simple and compound. *D. Scoparii* (Broom-tops), simple and compound, diuretic; a wine-

glassful. *D. Senegæ* (Senega Root), diuretic, purgative, stimulant; one or two wineglassfuls. *D. Taraxaci* (Dandelion-root); a wineglassful. *D. Tormentillæ*, astringent; 1 to 2 ounces, mostly used as an injection. *D. Ulmi* (Elm Bark), diuretic and alterative; 4 to 8 ounces. *D. Veratri* (White Hellebore), stimulant and cathartic, for external application. *D. Uvæ Ursi* (Whortleberry), astringent and diuretic. All these should be used fresh, especially in warm weather; direction for quantities of ingredients will be found under the several heads of the chief ingredients in each. Chemically speaking, a decoction is a continual boiling of certain bodies in water, in order to separate from them, or dissolve in the fluid, such parts as are only soluble at that degree of heat.

DECOLLATION (Latin *de*, from, *collum*, the neck), same as *Decapitation*, or removal of the head.

DECOMPOSITION (Latin). The separation of the component parts or principles of bodies from each other. See *Analysis*.

DECORTICATION (Latin *de*, and *cortex* the bark). The removal of the bark or husk; sometimes applied to removal of the skin.

DECREPITATION (Latin *de*, and *crepitus* a crackling). The crackling noise which is emitted when certain bodies, as common salts, are heated. See *Crepitation*.

DECUSSATION (Latin *decusso*, to cross like an X). A term applied to parts which cross each other, as the optic nerves.

DECUSSORIUM (Latin *decusso*, to divide). An instrument for depressing the dura mater after *Trepanning* (which see).

DEFLUXION (Latin *defluo*, to flow off), applied to an unusual flow of the secretions, as in *Catarrh* (which see).

DEGLUTITION (Latin *deglutio*, to swallow). The act of swallowing. See *Throat*.

DEJECTIO (Latin *dejicio*, to cast down); hence *D. alvina*, the discharge of the *Fæces*, (which see).

DELIQUESCENT (Latin *deliquesco*, to melt). The property of some salts of attracting moisture from the air, and becoming liquid. Familiar examples of this may be given in *Pearlash*, and *Salts of Tartar*, (which see).

DELIQUIAM (Latin *deliquo*, to leave), hence *D. animi*, leaving of the senses; *Fainting Syncope* (which see).

DELIRIUM (Latin *deliro*, to rage). A disorder of the brain or intellect—an alienation of the mind connected with fever, which being thus immediately depending on disease, is distinguished from *Mania* or *Madness* (which see). By the presence of the fever

in one case, and its absence in the other, *Delirium* may generally be distinguished from *mania*, but not always, because febrile symptoms sometimes occur in settled insanity; one great distinctive mark of *Delirium* is the absence of correct mental perceptions, of connected ideas; the motions and actions appear to be quite involuntary; there is no cunning in *delirium*—no hiding the thoughts, nor carrying out of a concealed project, as is often the case in madness; there is a perfect wandering of the intellect; the patient is beset with phantoms, and talks incoherently to creatures of his own imagination, and proclaims to the world his most secret deeds and cherished designs; all the senses are affected—seeing, hearing, tasting, smelling, touching, are no longer safe guides, but have abrogated their proper functions and duties. The insane person will follow out an argument, although based upon the most absurd premises. The person affected by *Delirium* cannot do this, but talks incoherently and quite at random. The maniac plots and contrives; not so the delirious patient: all comes out, frequently with a full consciousness of the folly or mischief of its utterance. As symptomatic of disease, *Delirium* may be referred to most severe forms of internal inflammation, but more especially to that of the brain. In all continued fevers it is likely to be present; in typhus it is nearly always so; in yellow fever always, and generally in the remittent fever of infants; we see it sometimes in periodic fevers, and also in hectic fever towards the close, when the brain is overcharged with impure blood. With cow-pock there is scarcely ever *Delirium*, rarely with Chicken-pock, nor in the mildest attacks of small-pox and bilious fever; it is commonly present in the inflammatory fever which accompanies erysipelas; in scarlet fever towards the third day of the eruption; and in the progress of rheumatic fevers. There are two forms of *Delirium*, distinguished as the *high* and the *low*. In the first, there is a quick strong pulse, a flushed face, a blood-shot eye, great restlessness, and much violence of conduct. Cupping, bleeding, or leeching, with strong purgatives, and firm, but gentle restraint, must be resorted to in this case. In the other, although the mental disturbance is equally great, there is generally a more quiet demeanour, with perhaps occasional fits of excitement only—less heat in the head, flush in the cheeks, throbbing of the veins, and nervous irritability; the pulse is feeble, the hands tremulous—sometimes affected with convulsive starting. In this case blood must not be taken away; the

bowels should be kept open, but with gentle aperients; the head should be shaved and kept cool, and the warmth of the feet attended to; Morphia, in quarter-grain doses, may be given, especially if there is great restlessness and convulsive motions; or Battley's Sedative Solution, beginning with 15 drops, and following that up with 5-drop doses, every two hours, until sleep is procured. Should great exhaustion follow, soups and wine may be administered.

Sympathetic Delirium may take either of these forms, but the low type is the most usual. We have this commonly after an accident or severe operation, or protracted childbirth; and in these cases opiates, stimulants, and tonics, with nourishing diet, are generally required. (See *Fevers*).

DELIRIUM TREMENS is generally the result of excessive and continued indulgence in intoxicating drinks; it consists of an exhausted condition of the nervous system, and is accompanied with more or less of mental disorder. The taking of opium for a considerable period will also sometimes produce this state of nervous exhaustion, which is called Brain Fever, and is described in some medical works under the several names of *Delirium ebriositatis*, *Erethismus ebriosorum*, and *Encephalopathie crapuleuse*; the French term it *Delirium et mania à potu*. There is a similar disease, called *D. Trama-licum*, which sometimes occurs after serious accidents and operations. (See above, *Sympathetic*). The symptoms of Delirium Tremens are great restlessness and irritation by day, and by night, want of sleep, or uneasy slumbers, haunted by frightful dreams, causing the patient often to scream out in terror; the mind is haunted by suspicions of those around, and although generally more collected than in other forms of Delirium, appears at times to be possessed of demons, which torment the patient with wild visions of seas of flame advancing to overwhelm him, and belts and rings of fire encircling him, and threatening destruction; legions of mocking spirits, too, come around him; he is tormented with unquenchable thirst, and the stings of a guilty conscience goad the poor inebriate almost to madness; he shrieks and raves, prays and curses all in the one breath; and when he sinks exhausted, finds no solace in sleep, which refuses to visit his hot and aching eyes, and agonized and trembling frame. As the disease advances, the mind becomes more and more disordered, the temporary Delirium probably passes into actual insanity; then ensue convulsions, probably epilepsy or apoplexy, leading to a death-

like stupor, which is but the prelude to death itself.

What can be done in such a case? The treatment must, of course, be of a soothing character: Opium, in full doses, either in the form of Morphine or Battley's Solution, should be administered; if, as is sometimes the case, the stomach is too irritable to retain liquid medicine, give the Gum Opium, in a pill, a grain and a-half as a first dose, to be followed by half-grain doses every hour or so; a drop of Creosote on a lump of sugar, may also be given, to stay the sickness, or an effervescing draught with a drop of Hydrocyanic acid in it. As the liver is generally more or less affected in this disease, a little Calomel should be got down, about three grains placed on the tongue, if pills cannot be taken; if they can, make six with the above quantity of Calomel and half a drachm of compound Colocynth pill, take two first, and one every two hours after, until they operate. Some recommend combining the Opium with these, if this is done it is best to add a grain and a half of Morphine to the above formula.

If these efforts are successful and the nervous excitement is subdued, there will be great prostration of strength; the great object will then be to restore the tone of the stomach, and to enable the patient to overcome that craving for alcoholic stimulants, which is sure to send him back into the paths of intemperance if it is indulged; a Bitter Infusion of Camomile is perhaps the best, but Carbonate of Soda, or Potash, in six or eight grain doses should be given with a small portion of alcohol, it may be Brandy mixed with yolk of an egg, beaten up raw, or with arrowroot, some bitter ale, and good nourishing food. For the rest, see *Drunkenness*, *Intemperance*.

DELPHINUM. The generic name of two plants belonging to the order *Ranunculaceæ*, sometimes employed medicinally. 1, *D. Staphisagria* (Stavesacre), the seeds of which are emetic, cathartic, and vermifuge; in over doses, poisonous: they have been given internally in lepra and other skin diseases, but are chiefly used for destroying parasitic insects, and for itch; Ointment and Decoction being the form of application; there is a concentrated Tincture which is sometimes used externally for the same purposes as white Hellebore. 2, *D. Consolida* (Larkspur). The seeds of this plant have the same properties as the above; the Tincture has been given in spasmodic asthma: dose 10 to 20 drops three times a day.

The active principle of both these plants

is called *Delphinia*; it is sometimes applied locally for neuralgic and rheumatic pains, and in paralysis instead of *Veratria*.

DELTOIDIS (Greek letter delta, Δ and *eidos* likeness). The name of a muscle of the *Humerus* (which see).

DEMENTIA (Latin *de* from, and *mens* the mind). Idiocy, Want of Intellect.

DEMI-BAIN (French for half-bath) sometimes applied to the hip-bath.

DEMONOMANIA (Greek *dæmon*, a demon; and *mania*, madness). A kind of madness in which the patient supposes himself possessed by demons. See *Mania*.

DEMULCENTS (Latin *demulcio*, to soften). Medicines which have softening and soothing properties, rendering them especially suitable for obviating the action of acrid and stimulant matters, not so much by correcting or changing their nature, as by involving them, or the delicate tissues exposed to their action, in a mild and viscid fluid. Their chief employment is in catarrh, diarrhœa, gonorrhœa, dysentery, gravel, stone, &c. They may generally be divided into two divisions, Mucilages and Expressed Oils; in the first we have Almonds, Coltsfoot, Arabic and several other Gums, Linseeds, Mallows, Liquorice-root, Swinewort, Barley, Oats, and Wheat, Sago and Starch. Among the latter are most European and many foreign Oils, Fat, and other animal substances, including Hartshorn shavings, Gelatine and Isinglass, Spermaceti and Wax. The following is a pleasant and efficacious Demulcent Draught, suitable where there is fever:—Almond Mixture 1 ounce, Carbonate of Potash 10 grains, Syrup of Poppies 1 drachm; mix and add a tablespoonful of Lemon juice or 10 grains of Citric acid, and drink while in a state of effervescence. As a form for a cough mixture, easily prepared, take Oil of Almonds 6 drachms, Liquor of Potash 1 drachm, shake well and make up to 8 ounces with Rose or plain water; sweeten with Syrup of Poppies and add Paregoric Elixir, 2 drachms, or Tincture of Squills, if required to be more expectorant. The best demulcent enema is made by dissolving 6 drachms of Starch in half-a-pint of hot water, add 1 drachm of Tincture of Opium if necessary.

DENS, Latin for a tooth, plural *Dentes*, (see *Teeth*). Hence also comes *Dentition*, cutting the teeth; *Dentifrice*, Tooth-powder (which see); and *Dentata*, the name of the second vertebra, so called from its projecting, tooth-like processes.

DENUATION (Latin *denudo*, to make bare). The laying bare of any part in operations.

DEOBSTRUENTS (Latin *de*, and *obstruo*, to

obstruct). Medicines to which are imputed the power of removing unnatural obstructions from any part of the body; they were formerly much used, and depended on, in medical practice, but latterly have fallen greatly into disuse, especially as internal remedies for diseases; Cod Liver Oil, Iodine, and Mercury, with stimulating liniments and friction are the only Deobstruents employed by modern practitioners.

DEPHLEGMATION (Latin *de*, from, and *phlegma*, a watery distilled fluid). The process by which a body is deprived of its water, as by *distillation*, with which the term is synonymous, as it is with *Concentration*.

DEPHLOGISTICATED (Latin *de*, from, and *phlogiston*, the inflammable principle). Hence we have *Dephlogisticated Air*, that is, air oxidised, or deprived of its phlogiston—Oxygen Gas; and *Dephlogisticated Marine Acid*, Oxymuriatic Acid, or *Chlorine*.

DEPILATORY (Latin *de*, from, and *pilus*, hair). Any application for removing hair from the body. It was customary of old to apply pitch to the part to be denuded, and then pull it away forcibly, bringing the hairs with it; but this rude and barbarous practice is now discontinued. Most of the Depilatories advertised contain Orpiment, which being a preparation of Arsenic, should be used with great caution, on account of the danger of absorption; the following simple and innoxious form is perhaps as efficacious as any:—Quicklime and Carbonate of Potash of each 2 ounces, Orris Powder 1 ounce, mix, and keep in a well-stopped bottle; when required for use, make up into a paste with water; apply to the parts, and wash off when dry.

DEPLUMATION (Latin *de*, and *pluma*, a feather). A disease of the eyelids, in which the hair falls off. See *Eye*.

DEPOSIT (Latin *depono*, to lay down). A sediment: medically, the term is generally applied to the urinary deposits which have been divided by Dr. Prout into three classes—the *Pulverulent*, or Amorphous Sediments, the *Crystalline*, or Gravel; and the *Solid Concretions*, or Calculi, formed by the admixture of the two first. See *Calculus*.

DEPRESSOR (Latin *deprimo*, to press down). A muscle which is called into action on the depressing of any part, as those of the ala, of the nose, of the angle of the mouth, and of the lower lip.

DERBYSHIRE NECK. A name given to an unnatural enlargement of the glands of the neck, because it is of more frequent occurrence in the hilly parts of Derbyshire than elsewhere; it is the same disease as *Goitre* (which see).

DERIVATION (Latin *derivo*, to drain off). A drawing away of the fluids of an inflamed part by applying blisters, &c. over it, as in pleurites; or by means of mustard poultices, or baths to the feet, or other extremities. Agents employed to produce this effect are termed *Derivatives*.

DERMA (Greek for the *Dermis Chorium*, or True Skin, in Latin *Cutis vera*). From the same root, we have *Dermic* applied to the action of remedies on the skin, and *Dermoid* applied to tissues which resemble the skin (which see), and *Cuticle*.

DEROSNE'S SALT, sometimes called *Narcotine*, or *Opiane*; it is obtained by treating opium with ether. See *Opium*.

DESSICATION (Latin *dessico*, to dry up). The operation of drying; hence and from *squama*, a scale, comes *Desquamation*, the falling off of the cuticle in scales, which sometimes takes place after fevers, and in some cutaneous diseases. See *Skin*.

DETERGENTS (Latin, *detergo*, to wipe away). Medicines which cleanse and remove such viscid humours as obstruct the vessels. Also such outward applications as serve to cleanse foul ulcers, for example, Honey, Tincture of Myrrh, Solution of Ammoniated Copper, Turpentine, &c.

DETERMINATION (Latin *de*, from, and *terminus* a bound). A flowing of blood to any particular part, as to the brain; thus we speak of determination of blood to the head, &c.

DETRUSOR URINÆ (Latin *detruo*, to thrust out). A muscle which expels the urine. See *Bladder*.

DIA (Greek preposition). This word is the prefix to a great number of medical terms, as will be seen by the following:—

DIABETES (Greek *betes*, a siphon). An immoderate flow of urine, distinguished as first *Insipidus*, (tasteless), when the urine retains its usual taste; and second, *Mellitus* (honeyed), when it is characterized by a saccharine taste. Generally speaking these may be considered as two stages of the disease, the urine being at first clear and without other than the usual taste, and afterwards becoming cloudy and sweet.

The chief causes of Diabetes are intemperate living, excess of venery, copious evacuations of the bowels long continued, frequent use of diuretics and acrid drinks, or it may be hard labour and poor living, or aught which tends to impoverish the blood. The best physicians consider it “an impaired action, or morbid change, in the natural powers of assimilation and digestion, which forms the proximate cause of the disease.”

The symptoms are a frequent and copious

discharge of urine, containing eventually, if not at first, a large proportion of saccharine and other matter. There is gradual emaciation, voracious appetite, great thirst, weakness, and disinclination to motion; the alimentary process is improperly performed, and thus the food taken does not yield its proper amount of nourishment, and constitutional derangement is the consequence.

Treatment. The diet should be entirely animal food—all vegetable substances to be avoided—the bowels to be kept quietly open with pills of Aloes and Soap, emetics and diaphoretics occasionally administered, perhaps the compound Ipecacuanha Powder, 10 grains at bed time is the best; alkaline drinks, such as Soda Water, may be given with advantage, and blisters and issues applied to the regions of the kidneys, covering the skin with flannel, anointing it with Camphorated Oil, using the warm bath and the flesh brush are also good, as are Chalybeate and Sulphurated Waters. Tonics, astringents, and stimulants will be of service, especially preparations of Iron with Tincture of Cantharides; if in the summer, sea-bathing, and anything which may serve to invigorate that system: such is an outline of general treatment; of course constitutional peculiarities require special and appropriate remedial measures, and of these only the professional adviser can judge.

DIACHYLON (Greek *xylos*, juice). An emollient digestive plaister, formerly prepared from expressed juices of plants; the *Emplastrum Plumbi*, of the London Pharmacopœia, is that which now goes by the name of Diachylon; it is made of the Oxide of Lead (Litharge) boiled with Olive Oil in water; it is a good dressing for wounds and ulcerated surfaces, but is chiefly used as a basis for other plaisters; it is less stimulating than the Resin or common Sticking Plaister, which is also frequently called Diachylon. See *Plaisters*.

DIÆRESIS (Greek *ireo*, to divide). A stoppage, or division in the continuity of a disease.

DIAGNOSIS (Greek *ginosko*, to discern). This is the art of discovering the nature of diseases, and of distinguishing them one from another. In medical treatment much, very much, depends upon a correct diagnosis; it is the basis whereon to found remedial measures; and great care should be taken to have this very correctly laid down, or the whole course of treatment will probably be like an argument reasoned from false premises, and no good results may be expected, but rather bad ones. In diagnosing a disease, the true man of science

will note the most minute circumstances, and it is only by careful study, and close attention to symptoms, that it can be properly done.

DIAPHORESIS (Greek *phoreo*, to carry). Increased perspiration : from the same root comes also

DIAPHORETICS. Medicines which increase the natural exhalations of the skin ; if they are not so powerful as to occasion actual perspiration they are called *Sudorifics* (which see). The difference in the operation of these two classes of remedies is not in kind, but in degree only. Diaphoretics may be divided into five orders, viz. : 1. *Pungent*, as the Volatile Salts and Essential Oils, which are more especially adapted for aged persons, on whom other diaphoretics have little effect ; 2. *Calefacient*, which excite a degree of warmth in the parts to which they are applied, and, like the last, are given where the circulation is low and languid ; *Serpentaria*, *Contrayerva*, and *Guaiacum*, may be mentioned as common examples of this order ; 3. *Stimulant*, best fitted for vigorous and plethoric habits ; such are the preparations of Antimony and Mercury ; 4. *Antispasmodic*, such as Camphor, Musk, and Opium, given to promote a diaphoresis when the circulation is too full and rapid ; 5. *Diluent*, such as Water, Barley Water, thin Gruel, Whey, &c., given when it is desirable to promote perspiration, and so check the course of active diseases. The following are among the principal diaphoretics : Antimony, Oxide of, dose 1 grain to 10 ; Powder of, 5 to 20 grains ; Tartarized, $\frac{1}{8}$ th to 1 grain ; Camphor, 5 to 20 grains ; Contrayerva, 10 to 30 grains ; Dover's Powder, 5 to 20 grains ; Guaiacum, Resin or Wood, 10 to 30 grains ; Liquor of Acetate of Ammonia, $\frac{1}{2}$ to 1 drachm ; Liquor of Carbonate of Ammonia, same ; Nitrate of Potash, 5 to 10 grains ; Spirit of Ammonia, $\frac{1}{2}$ to 1 drachm ; of Nitric Ether, 10 to 20 drops, &c.

The efficacy of diaphoretics is much increased by combinations with each other.

DIAPHRAGM (Greek *phrasso*, to divide). This is the transverse muscle which separates the thorax from the *Abdomen* (which see, also *Midriff*) ; its arteries are termed *diaphragmatic* ; inflammation of the organ is called *diaphragmitis*, and the disease which we now call *Angina Pectoris* (which see), among old medical writers went by the name of *diaphragmatic gout*.

DIARRHŒA (Greek *reo*, to flow). Looseness of the bowels, sometimes called *Flux* (which see). This is a very common disorder, arising from a variety of causes, fore-

most among which may be mentioned suppressed perspiration, a sudden chill or cold applied to the body, acid fruits, or any indigestible food, oily or putrid substances, deficiency of bile, increased secretion of mucus, worms, strong purgative medicines, gout or rheumatism turned inwards, &c. Hence diarrhœa may be distinguished as *bilious*, *mucous*, *lienitery* (where the food passes unchanged), *cœliac* (where it passes off in a white liquid state, like chyle), and *verminose*, produced by worms.

The *symptoms* are frequent and copious discharges of feculent matter, accompanied usually with griping and flatulency ; there is weight and uneasiness in the lower belly, which is relieved for a time on the discharge taking place ; there is nausea, often vomiting ; a pale countenance, sometimes sallow ; a bitter taste in the mouth, with thirst and dryness of the throat ; the tongue is furred and yellow, indicating bile in the alimentary canal ; the skin is dry and harsh, and if the disease is not checked great emaciation ensues.

The *treatment* must depend in some degree on the cause ; the removal of the exciting matter, by means of an emetic, or aperient medicines, will, however, be a safe proceeding at first ; if the Diarrhœa be caused by obstructed perspiration or exposure to cold, nauseating doses of Antimonial, or Ipecacuanha Wine, may be given every three or four hours, the feet put into a warm bath, and the patient be well covered up in bed. When the case is obstinate, resort may be had to the vapour bath, making a free use of diluents and demulcents. Where there is acidity of the stomach, denoted by griping pains and flatulency, take Chalk Mixture, with Aromatic Confection, and other anti-acid absorbents or alkalies, such as Carbonate of Potash, with Spirits of Ammonia, and Tincture of Opium, or some other anodyne ; if from putrid or otherwise unwholesome food, the proper course, after the removal of the offending matter, is to give absorbents, in combination with Opium, or if these fail, acid and an anodyne ; the following is an efficacious formula : Diluted Sulphuric Acid, 2 drachms ; Tincture of Opium, $\frac{1}{2}$ a drachm ; Water, 6 ounces ; take a tablespoonful every two hours. When the looseness proceeds from acrid or poisonous substances, warm diluent drinks should be freely administered, to keep up vomiting, previously excited by an emetic ; for this purpose thin fat broth answers well ; a purge of Castor Oil should also be given, and after its operation, small doses of Morphine, or some other preparation of Opium.

When repelled gout or rheumatism is the cause, warm fomentations, cataplasms, blisters to the extremities, and stimulant purges, such as Tincture of Rhubarb, to be followed by absorbents with anodynes; if worms are the exciting cause, their removal must be first attempted, but drastic purgatives, often given for the purpose, are dangerous; in this case, Turpentine and Castor Oil, 1 drachm of the first and 6 of the last, may be recommended. The Diarrhœa which often occurs in childhood during teething, should not be suddenly checked, nor at all, unless it prevails to a hurtful extent; if necessary to stop it, give first a dose of Mercury and Chalk, from 2 to 4 or 6 grains, according to age, and then Powder of Prepared Chalk, Cinnamon, and Rhubarb, about 2 grains of each every four hours. Diarrhœa sometimes attacks pregnant women, and, in this case, its progress ought to be arrested as quickly as possible. In all cases of looseness of the bowels it is best to avoid hot thin drinks, unless given for a specific purpose; the food, too, should be simple and easy of digestion; Milk, with Cinnamon boiled in it, thickened with Rice or Arrow-root, is good; vegetables, salt meat, suet puddings and pies are not; if there is much exhaustion, a little cool Brandy and Water may be now and then taken. When Diarrhœa is stopped, astringent tonics, with aromatics, should be given to restore the tone of the stomach.

This disease may be distinguished from *Dysentery* (which see) by being unattended by either inflammation, fever, contagion, or that constant inclination to go to stool without a discharge, which is common in the latter disease, in which the matter voided is sanguineous and putrid, while that in Diarrhœa is simply feculent and alimentary.

DIARTHROSIS (Greek *arthros*, a joint). Any moveable connection of *Bones* (which see) and *Joints*.

DIASTOLE (Greek *diastelio*, to dilate). The dilation of the heart and arteries; it is the opposite of *Systole* (which see).

DIASTASIS (Greek *diastemi*, to separate). A forcible separation of bones without a fracture.

DIATHESIS (Greek *tethemi*, to arrange). The state of the body, or constitutional arrangement. See *Idiosyncrasy*.

DIORTHOSIS (Greek *ortho*, to regulate). The restoration of parts to their proper situation; this was one of the ancient divisions of *Surgery* (which see).

DIOROTIC (Greek *dis*, twice, and *krono* to strike). A term applied to the pulse

when there appears to be a double pulsation.

DIDYMI (Greek *didymus*, double). Twins; a term formerly applied to the testes, whence *Epididymis*, that which lies above the *Testes* (which see).

DIET (Greek *diæta*, regimen). Applied here to the food proper for invalids. In the treatment of disease much undoubtedly depends upon the nature and proper regulation of the food taken, to which the wise practitioner will pay as much attention as to the medicines he prescribes; indeed, many diseases might be cured simply by conforming to certain dietetic rules, if the sufferers had but patience to wait for nature to work a cure. But generally speaking they have not; often it is a matter of necessity, that a more speedy restoration to a state of partial, if not complete, health should be effected or attempted; and therefore "the doctor" is urged to use active remedies, and reduced to the necessity of making the diet subsidiary to the main plan of treatment. We may here observe that *La diète* of the French physicians is a phrase signifying extreme abstinence; that *Dietetics* is that part of medicine which refers to the diet, and that *Diet Drink* is the name for Decoction of *Sarsaparilla* (which see), also *Food*, *Regimen*.

DIGASTRICUS (Greek *dis*, twice, and *gaster*, the belly). Having two bellies, a term applied to the *Os hyoides* (which see).

DIGESTION (Latin *digero* from *diversion* and *gero* to carry to different points). The Physician, the Surgeon, and the Chemist, have each a different meaning for this word: with the first it is the change of the food, on its passing into the stomach, to *chyme*, or the absorption and distribution of its nutrient parts in the form of *chyle* through the system; with the second it means bringing a wound into a state in which it forms healthy pus; applications which promote this object being called *digestives*; with the third it is the continual action of a solvent upon any substance; thus certain ingredients are *digested* in spirits of wine to make a tincture and so on. But it is with the Physician's definition that we are now chiefly concerned, and this may be comprehensively stated in the process, or rather processes, by which food is fitted for the nourishment of the body; masticated in the mouth, and then mixed with saliva, it passes down the throat into the stomach, where it is subjected to the action of the gastric juice; it is then mixed with the bile and juice from the pancreas, and conveyed through the small intestines—such of it as is not ab-

sorbed into the blood—and otherwise taken into the system, is thus conveyed through the large intestines, or colon, from whence the useless part of it is discharged in the form of *Fæces* (which see). It will thus be seen that many organs are concerned in the work of digestion, and the importance of the proper performance of their several duties will be easily understood, nor will any wonder be felt that one or other of them is frequently out of order, and that Indigestion, or complaints arising from it, should be so constantly complained of, more especially when it is considered how little care is generally taken as to the quantity and quality of the food submitted to these processes. Generally speaking, too, we eat not only what is unfit for the purposes of digestion and nutrition, not only at improper times, and in insufficient or overloading quantities; but we do it in too great a hurry, presenting the food to the action of the gastric juice in an unfit state, for want of due mastication. Then again we seldom take the proper rest after full meals, so as to allow the various organs concerned in this work, so necessary to our health, a fair chance of duly performing their offices; nor do we keep our bodies in such a state or position as to facilitate their operations. What wonder then that we are so often afflicted with Indigestion and its train of concomitant evils. Let us take good wholesome food, at regular intervals, avoid unnecessary exposure to cold and damp, and excesses of all kinds, keep the pores of the skin clear by bathing and rubbing, and attend to those sanatory rules with which we are all acquainted, and the work of digestion will go on smoothly enough, provided there is no disease in any of the organs concerned to check it; for diagnosis and treatment of each, reference must be made to the several heads of *Bowels*, *Indigestion*, *Stomach*, &c.

DIGESTIVE SALT. A name formerly applied to the *Muriate of Potash* (which see).

DIGITATES PURPUREA (Latin for the Purple Foxglove). A familiar British wild plant, whose leaves are sedative and diuretic; its active principle is called *Digitalis*. See *Foxglove*.

DIGITUS (Latin *digere*, to point out). Hence we have *D. manus*, a finger; *D. index*, the fore finger; *D. medius*, the middle finger; *D. annularis*, the ring finger; *D. auricularis*, the little finger; *D. pedes*, a toe; and *Digital*, the designation of the arteries of the fingers (which see) also *Toes*.

DILATUM (Latin *dilato*, to enlarge) applied to the heart. It may be either temporary,

as the *dyastole* of the organ, or permanent, as its *passive aneurism*. See *Heart*.

DILL. A plant, the seeds of which are carminative and stimulant. See *Anethum*.

DILUENTS (Latin *diluo*, to dilute). Watery drinks which increase the fluidity of the blood and render several of the secretions and excretions less viscid. Under this head may be included all *Demulcents* (which see), with Gruel and Barley Water, Beef Tea, Chicken and Mutton Broth, Infusion of Balm, of Tea, and several other plants; Plain and Toast Water, Whey, &c. Diluents are of great value in many ways. They promote the operation of more active medicines, especially aperients and diuretics; they reduce the quality of the blood, and therefore assist in subduing acute inflammation; they promote perspiration, and so relieve the system in fevers and bilious disorders; they are also useful in catarrhal and phthisical complaints; in *Diarrhæa*, *Dysentery*, *Calculus affections* and *Stranguary* (all of which see).

DIPLOE (Greek *diplous*, double). The cellular osseous tissue between the two tables of the *Skull* (which see).

DIPLOPIA (Gr. *diplous* and *ops*, the eye). Double sight (Latin *visus duplicatus*). This is a disease of the eye in which the person sees an object double or triple; it is of two kinds—first, when objects have this appearance only when looked at with both eyes; and, second, when they so appear whether surveyed with both or one. See *Sight*.

DIPSO-MANIA. This is a species of monomania with which habitual drunkards are sometimes affected. It has been described as “a morbid craving for drink, which generally occurs at intervals, in which persons are seized with an irresistible propensity to drink to excess, although conscious at the time of their misconduct, but are unable to control themselves. See *Intemperance*.”

DIRECTOR (Latin *dirigo*, to direct). A narrow, grooved instrument of silver or steel, used by the surgeon to direct his knife in performing *operations* (which see).

DIRIGENS (same root). An old term applied to that constituent in prescriptions, which was supposed to direct the operations of the other remedies; thus Nitre, in conjunction with Squills, is diuretic; with Guaiacum, it is diaphoretic. See *Prescriptions*.

DISCUTIENTS (Latin *discutio*, to shake to pieces). Substances which have the power of resolving tumours, or more properly, of dispersing the morbid matter of which they are composed; for this purpose, preparations

of Ammonia and of Lead are very commonly used. The following is a good formula for a discutient lotion:—Liquor of Acetate of Lead (Goulard's Extract) $\frac{1}{2}$ a drachm; Solution of Acetate of Ammonia 2 ounces; Water 6 ounces; add 2 drachms of Laudanum if the surface for which the application is required be painful and irritable.

DISEASE. This is a departure from the healthy state of the system generally, or of any of its parts or organs; mere functional disorder does not amount to disease, although it very commonly proceeds from some change of structure, to which the term will properly apply; indeed it is probable that there rarely, if ever, exists functional disarrangement without organic disease to a greater or less extent, although its presence cannot all times be detected. Diseases have been divided into ten classes—viz., 1. *Acute*, when they are severe and of short duration; 2. *Chronic*, when of long continuance; 3. *Sporadic*, resulting from occasional or accidental causes, as cold, fatigue, &c.; 4. *Epidemic*, owing to a prevalence of excessive heat, contagion, &c.; 5. *Endemic*, prevailing in localities caused by marsh miasma, &c.; 6. *Intercurrent*, that is the sporadic form occurring in the midst of Endemic or Epidemic diseases; 7. *Contagious*, disseminated by contact or touch; 8. *Infectious*, propagated by effluvia, or the breath of patients crowded too much together; 9. *Eruptive*, skin diseases; 10. *Febrile*, fevers. It must be evident, however, that some diseases will come under more than one of these heads; thus cholera, as far as its nature can be understood, is at once acute, epidemic, and contagious or infectious—some contend that it is both; so that this classification is not very distinctive.

It is often extremely difficult to trace the origin of Disease. Many persons have an hereditary tendency to one or other of its forms: this is especially the case with scrofula, consumption, gout, gravel, rheumatism, and affections of the brain producing insanity or imbecility; climate and food have, of course, much to do with the setting up of organic disease, which will often proceed from causes in themselves very trifling. A depressed state of the mind renders a person more liable to certain diseases than he would otherwise be, and the fear of an epidemic will at times be certain to produce an attack; hence persons who have a firm reliance upon an all-seeing and directing Providence, to keep the mind calm in the midst of danger, will be more likely to escape than those who are doubtful and desponding. Among the most common existing causes of

Disease, may be named certain occupations. To these we have already alluded, under the head of *Consumption*. It may also be observed, that one disease is frequently the exciting cause of another; thus apoplexy frequently results from disease of the heart and paralysis of the brain. As to modes of prevention, treatment, &c., reference must be made to the heads under which diseases are severally described.

DISCHARGE. Applied as a medical term generally to all substances cast out of the body, but in a more restricted sense to the purulent matter from *Abscesses*, *Ulcers*, and *Wounds* (which see).

DISINFECTION. The purification of infected air by means of *Disinfectants*, agents which act by dispersing or diluting the particles prejudicial to health, as fresh air and water; by destroying or altering their chemical composition, as heat, chlorine gas, muriatic acid, &c.; or by absorption, as quick lime, and charcoal. These disinfecting agents are very serviceable in sick chambers, hospital wards, and many other places where the germs of disease are present in the atmosphere; but the greatest disinfectants after all are *cleanliness* and *ventilation*, and these are within the reach of most persons. See *Air*, *Chlorine*, *Contagion*.

DISLOCATION (Latin *disloco*, to put out of place). The displacement from their natural position of bones articulated together. See *Luxation*.

Dislocations may be either complete or incomplete; in the first, the articular surfaces remain partially in contact, which can only occur in the foot, knee, and ankle; in the last, there is an entire separation. They are also distinctively named, according to their direction, as upward, downward, forward, backward, &c.; or to the circumstances which accompany them, as *first simple*, when there is no wound communicating with the joint, and externally with the air; second, *compound*, when there is such a wound. They are also called *spontaneous* when they occur in consequence of disease destroying the cartilages, ligaments, and articular cavities of the bones. Some dislocations, as those of the humerus, have also been distinguished as *primitive* and *consecutive*, the first being the sudden effect of external violence, and the second following this by the influence of other causes, as a fresh fall before the connection of the two joints has taken place.

Nearly all the bones of the human body are liable to displacement, but some are much more so than others, such are those of

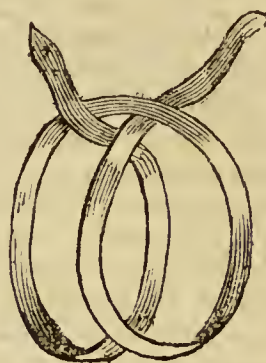
the hip, the ankle, the shoulder, the elbow, the lower jaw, the fingers and toes, and in these joints the detection of the dislocation is tolerably easy, even to the unprofessional person; but with many other parts it is extremely difficult of detection, therefore, a surgeon should always be called in when an accident has occurred in which there is likely to be such a result.

The symptoms of a dislocation having taken place are loss of power in the limb or member, which becomes fixed in one position, any attempt to move it causing extreme agony; there is also a sensation of numbness in the part, and the patient feels sick and faint, probably on account of the severe pain; an examination of the joint also will show a deformity.

Treatment. It is useless in such a case to apply fomentations or stimulant liniments; attempts should at once be made to "reduce" the dislocation, as it is called: until this is done there will be no relief for the patient, and the longer it is delayed the more difficult will the operation be, because the muscles, which are at first relaxed by being drawn out so far as to allow the joint to slip out of its socket, or from its point of articulation, resume their former rigidity, and exert a greater power in opposition to the efforts of the operator.

Whenever there is a doubt as to the nature of the injury which has happened, it is always best to wait the arrival of a surgeon before making any violent efforts to reduce what is supposed to be merely a dislocation, but may in reality be that in combination with a fracture, or an injury of quite another kind; but when the case is tolerably clear, no time should be lost in effecting the reduction; this may be done by drawing down the limb or members until the ends of the dislocated joints are brought as nearly together as possible, then if the pressure is relaxed, the muscles will generally draw them into their proper position, and hold them there; care should be taken to keep the upper bone of the two which it is desired to connect firmly fixed, so that in pulling the lower, the downward or outward, as the case may be, does not follow it, and so prevent the necessary extension of the muscles. If the dislocation is in the humerus, or shoulder, a very common part, pass a sheet or strong towel round the body of the patient, and fasten the ends to a staple in the wall, or some other fixed support, then take another towel, and making what is called a "clove-hitch," slip it over the elbow, draw it tight, and give the ends to two or three strong assistants, who must pull

gently, yet firmly, and steadily for some minutes, while the operator, with his knee beneath the armpit, endeavours by raising and depressing the bone as it is drawn out,



to direct it so that, when it has attained a point of extension beyond the edge of the socket from which it has been displaced, it will slip back into it. A dislocation of the shoulder may be either forwards or backwards; although the latter is a rare case, it may be known by the swelling at the shoulder-blade, the flatness of the outside, and incapacity of movement; the reduction may be effected in the same way as above described. After it is accomplished, it is most prudent, in either case, to keep the arm confined to the side for some days by means of a bandage, as it may be thrown out again by the slightest attempt to use the limb.

Dislocation of the Collar Bone, may occur at either end, but it is difficult for a non-professional man to detect this, and if such an injury is suspected, it is best to summon surgical aid, compressing the parts until it arrives, with a crossed bandage. This accident, however skilfully treated, usually results in some permanent deformity.

Dislocations of the Elbow are the most difficult to understand and to reduce of any, on account of the complication of joints at that part, where it must be remembered, three bones meet, viz., the arm-bone (*humerus*), and the two bones of the fore-arm (*radius* and *ulna*), the second of which may be dislocated by itself, backwards or forwards, and the last only backwards, carrying the radius with it; two lateral displacements of the bones of the fore-arm, also sometimes occur, and lastly, and rarely, a displacement in which the cartilaginous surface of the humerus rests between the radius and ulna; it must be evident that a thorough knowledge of the anatomy of the parts is required for the reduction of either of these, therefore, we need not enter into a description of the means to be used.

Dislocation of the Spine is the most serious that can happen; in this case, death is sure

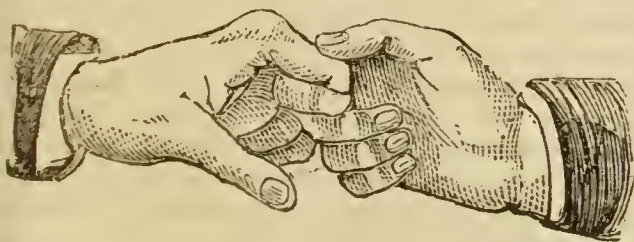
to ensue, and it usually takes place soon after the accident, which happily is of very rare occurrence; but little can be done to remedy this mischief, and that little must be under the direction of the professional adviser.

Dislocation of the Ribs sometimes, though rarely, takes place, and this is very difficult of detection; the treatment is the same as that of a *Fracture*, which see.

Dislocation of the Pelvic Bones and Os Coccygis. These are both of extremely rare occurrence, immense force being required to effect either of them; they cannot be treated by other than a surgeon, and have generally a fatal result.

Dislocations of the Wrist Joint are generally caused by the hand receiving the weight of a heavy fall; it may be of three kinds, all of which may be distinguished from a sprain by the unnatural bony projections, either in the front or back, as the case may be, in contradistinction to the soft swelling only which is set up by the latter. The mode of reduction is this: let the patient's arm be grasped firmly, just above the elbow, by an assistant, while the operator, supporting the fore-arm with his left hand, takes hold of the patient's hand with his right, and the two exerting their force in opposite directions, produce the extension necessary to replace the joints in their natural position. After the reduction a roller bandage should be applied round the wrist, and a splint bound before and behind the fore-arm, passing on either side down as far as the metacarpal bones.

Dislocations of the Fingers and Toes are of rare occurrence, and when they do happen, it is generally between the first and second joint; they may be easily known by the projection of the dislocated bones, and reduced without much difficulty, if done soon after the accident. The following cut from



Fergusson's Surgery, will show the method of reduction; the clove-hitch, made with a piece of stout tape, may be used if there is much difficulty; the wrist during the operation should have a slight forward inclination given to it, this will relax the flexor muscles.

Dislocation of the Jaw. A blow upon the chin when the mouth is opened widely, will

sometimes cause this, as will yawning or gaping very deeply; by it the patient is placed in a very awkward position, with his mouth set wide open, as represented in the accompanying cut, and no power



to close it or to articulate words. This kind of dislocation may be either complete or partial; in the latter case the mouth is not opened so widely as in the former, and it may be known by the chin being thrown on one side, opposite to that of the displacement. There is not usually much difficulty in reducing a dislocation of the lower jaw, the upper cannot be dislocated; the plan is to wrap a handkerchief round each thumb, and placing them in the inner angles of the jaw, the coronoid processes as they are termed, endeavour by forcing it backwards and downwards, to restore it to its proper position. Success will generally attend the effort, if only a moderate degree of force be used, especially if it be by a skilful hand. Some put a transverse piece of wood into the patient's mouth to serve the purpose of a lever, but this is a rough method of operating, and no really skilful surgeons resort to it.

Dislocation of the Hip Joint is one of the most frequent causes of lameness; it may be caused by a fall, or coming down heavily on the feet from a leap, and frequently occurs to children through the negligence of servants. A careful mother will take note of the slightest alteration of the gait of her child, and institute an examination at once, for sometimes the displacement of the hip-

joint in the young is attended with little or no pain, and the limping gait is its only obvious indication, unless it be a manifest disinclination to walk at all; if it be a child in arms to whom the accident has occurred through the carelessness of its nurse, the injury may remain undiscovered until the displaced joint has become too firmly fixed in its unnatural position, ever to be restored to its natural one, and a shortened limb, producing lameness for life is the consequence. By a very slight examination of the part, however, a dislocation of this kind may be detected; there is a very considerable projection of the bone backward, the thigh is drawn back, and the knee inclines inward, and is raised above its fellow knee, so that the foot is raised from the ground; the whole limb, too, is for a while immoveably fixed. Of the dislocation of this joint, there are four distinct forms which we need not pause to describe: in each of them the reduction must be effected in the same way. Place the patient on a bed, with a strong towel, or sheet, passed between his legs and brought up round the hip; let the ends of this be fastened to some firm support, such as a stout stick passed across a doorway; then fix another towel to the thigh by means of a clove-hitch, and let three or four strong men take hold of the ends and keep up a steady strain for a quarter of an hour, or more if it be necessary; the muscular power of the patient, if it be an adult, should have been previously weakened by bleeding, or Tartar emetic given in half-grain doses every ten minutes until nausea is produced; this should be done in all cases of difficult reduction. The administration of Chloroform will have much the same effect, and will likewise produce insensibility to pain. Sometimes, in such cases as these, a strap, with a pulley fixed to the wall, is used to effect the extension; most hospitals are furnished with this apparatus, and employ it constantly.

As dislocation of the hip-joint is sometimes confounded with fracture of the neck of the bone within the capsular ligament, and as great mischief might result from applying extension in such a case, it will be as well to observe, that in fracture, the knee and foot are turned outward—in dislocation, inward.

Dislocation of the Patella is frequently produced by a person falling with the knee turned inwards, and the foot outwards; it may be in either of three directions—outwards, inwards, and upwards. The method of reduction is to place the patient on a bed, and raising his leg by lifting it at the heel, press on the edge of the dislocated bone,

which is furthest from the articulation, until the inner edge is raised over the *crudella* of the former, and is thence drawn into its place by the action of the muscles. Evaporating lotions should then be applied until the inflammation is subdued, when the part may be bandaged. When the dislocation is upwards, the ligament of the patella is torn through, and in consequence there is generally a great deal of inflammation. Leeches are usually required, and cold lotions for six or seven days, after which the leg must be kept suspended by a splint and rollers until a union of the ruptured ligament is effected.

Dislocation of the Tibia, at the knee joint, may be complete or incomplete, upwards or backwards; in either case, simple extension is sufficient to reduce it.

Dislocation of the Femur is commonly caused by a person striking his toe against some projecting body when the face is averted; he feels immediately pain at the knee, which cannot be completely extended. To effect the reduction of this it is necessary to bend the limb backwards as far as possible; by this the pressure made by the thigh-bone is removed, and the cartilage slips back into its place; when once this accident has occurred, it is very likely to happen again, to prevent which a linen bandage, with four straps, should be bound tightly above and below the patella.

Dislocation of the Ankle Joint may be either inwards, outwards, or forwards; in the first case it may be the result of a jump from a considerable height, or sudden check of the foot when running, the body by the impetus being carried forward. In the second, the foot is probably twisted in running or leaping, or, it may be that the passing of the wheel of a carriage over the leg causes the injury. Jumping from a carriage in rapid motion, or falling backwards with the foot confined, will probably cause the third form of displacement. Only a surgeon can detect the difference in these forms of knee-dislocation, and adopt the measures proper for their reduction; there is great likelihood that they will occur again, having once happened, therefore it is best to keep the ankle bandaged or supported by means of an elastic stocking.

Compound Dislocations most frequently happen at the ankle, elbow, and wrist, scarcely ever at the hip; the reduction should be effected without delay, and with as little violence or disturbance as possible. When the end of the bone protrudes it should be carefully examined, and, if necessary, washed in warm water, that no dirt or other

foreign particles adhere to it to produce irritation, and keep up the suppurating process in the joint. The opening in the skin in these cases is caused by the protrusion of the bone, or by violent contact of the part with some hard angular substance; sometimes the end of the bone is shattered, and then the detached pieces should be carefully removed with the fingers; the opening to be enlarged with the scalpel for this purpose, should it be desirable. This is also sometimes necessary to be done for effecting the reduction. In these cases there is often much fever, and the patient perishes from the violence of the first paroxysm. Such dislocations as these are very dangerous, sometimes it is only by amputation of the limb that the patient's life can be saved; closing the wound with slips of adhesive plaster, applying splints with a roller bandage, to be kept wet with cold water, poulticing; if there is surrounding inflammation applying leeches about the part.

Sir Astley Cooper has defined a dislocation to be the "removal of the articulating portion of a bone from that surface to which it is naturally connected." This removal, as we have shown, is generally effected by violence, and the primary object of remedial measures is to bring the point of articulation, or union, back to its natural position. When the muscles are only extended, and there is no laceration, or severance of a ligament, and no fracture of either of the bones, there is little difficulty in reducing common dislocations, if taken in hand shortly after their occurrence; but if the bones are suffered to remain long displaced, so that the muscles become accustomed, as it were, to their new position, there is sure to be permanent distortion, and most likely lameness of some kind. The displaced bone, at its new point of contact with other bones, forms a connexion therewith, and finds there a basis for its future movements and operations, it requiring as much force to remove it from thence, as it did from its more natural position—it must be, in fact, another dislocation. See *Joints, Muscles*.

DISORDERED FUNCTIONS. This is a term frequently employed in medical practice, and it signifies any disarrangement in the regular and natural operations of the various organs of the body; it is in fact but another name for *Disease* (which see).

DISPENSARY (Latin *dispenso*, from *diver-sum penso*, to distribute by weighing). A place where medicines are compounded. More generally applied to an institution where the poor receive professional advice and medicines gratuitously

DISSECTION (Latin *disseco*, to cut up). The art of separating, by means of the scalpel, the parts of organized bodies, so as to display their structure. See *Anatomy*.

DISTENSION (Latin *distendo*, to stretch). The stretching of a hollow viscera by too great an accumulation of its contents—as of the bladder in retension of urine, of the intestines with faeces, the veins with blood, or the stomach with wind. See *Flatulency*.

DISTICHIA or **DISTICHIASIS** (Greek *dis*, twice, *stichos*, a row). A term applied to an affection in which each eyelid has a double row of eyelashes, which inclining inwards irritate the eye. See *Ophthalmia, Trichiasis*.

DITTANDER. The *Lepidium Latifolium*, a



native plant, commonly called Pepperwort, sometimes used in acute rheumatism.

DISTILLATION (Latin *distillo*, to drop by little and little). Is a chemical process, in which, by the application of a regulated heat to fluid substances, in a covered vessel called a *Still* (which see), the volatile constituents ascend in vapour into what is called the worm of the still, and meeting there a cooler atmosphere, are, by condensation, reduced to a liquid state. *Dry Distillation* is performed in the same way, except that the substance is not previously dissolved in any menstruum; and *Destructive Distillation*

is the subjection of bodies to a red heat in close vessels, and collecting the results. This is also called *Sublimation*.

DISTILLED WATER. Water which has passed through the process of *Distillation* (which see) also *Aqua*; it may be either pure, or impregnated with the flavour and principle of some herbs, as Anise or Carraway Seeds, Cassia or Cinnamon Bark, Elder Flowers, Fennel Seeds, Laurel Leaves, Peppermint, Spearmint, Pimento Berries, Penny-royal, and Rose Leaves, which constitute the principal of the medicinal distilled waters.

DISTOMA HEPATICUM (Greek *dis* twice, *stoma* the mouth, and *epar* the liver). A worm sometimes found in the liver and gall bladder of man, but more frequently in those of sheep and goats. See *Vermes*.

DISTRIX (Greek *dis*, twice, and *thrix*, the hair). A disease of the hair in which it splits at the ends. See *Hair*.

DISTORTION (Latin *distorqueo*, to wrest aside). A term applied to an unnatural twisting of the *Spine*, or *Limbs* (which see).

DIURESIS (Greek *dia* through, and *oureo* to make water). An excessive flow of *Urine* (which see). Also *Bladder* and *Kidneys*.

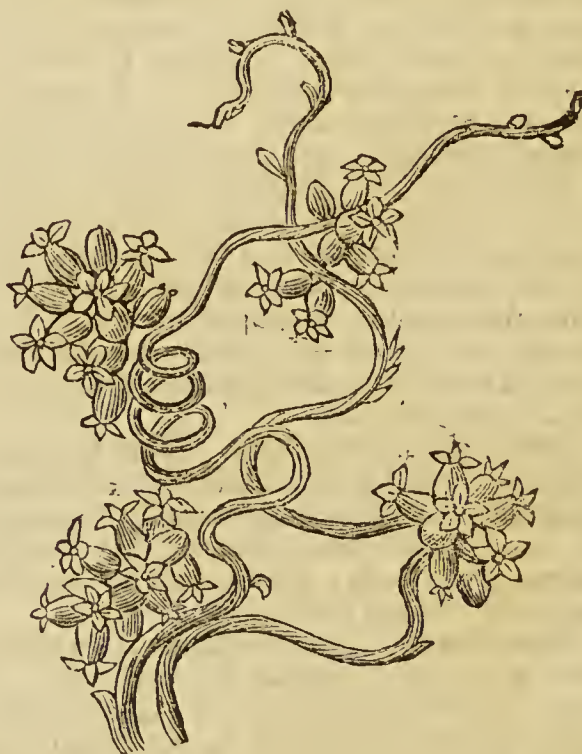
DIURETICS (same root as above). Medicines which augment the urinary discharge; this effect will be produced by any substance which stimulates the secreting vessels of the kidneys. All the saline diuretics act in this way; they pass into the circulation, and appear to exert a specific action upon these vessels. The free drinking of mild diluents will also have this effect, while the application of external heat to the body will exert a contrary influence by exciting perspiration, which is an increased cutaneous secretion. Diuretics are useful as adjuncts chiefly; their action alone is not to be depended on for the cure of disease; they are merely palliatives. Thus, in dropsy, in which they are chiefly employed, if perfectly successful, they do but remove for a time a portion of the effusive fluid, which quickly collects again: they are sometimes useful in calculous affections, also in gonorrhœa, and they have a tendency to check profuse perspiration, and diminish plethora; but their frequent and constant use is very weakening to the system. The medicines of this class chiefly used are Broom (*Genista*), the tops in powder, dose, 1 scruple to 3; Bitter-sweet (*Dulcamara*), same dose; Dandelion, extract 10 grains to $\frac{1}{2}$ a drachm; Foxglove (*Digitalis*), leaves and seed, $\frac{1}{2}$ a grain to 3 grains; Juniper, berries and tops, 1 to 3 scruples; Meadow Saffron (*Colchicum*), root and seed, $\frac{1}{4}$ a grain to 3 grains; Sarsaparilla, root powdered, 1 to 2 drachms; Snake-root

(*Seneka*), 1 to 3 scruples; Squills, root powdered, 1 to 3 grains; Spanish Flies (*Cantharides*) $\frac{1}{2}$ a grain to 3 grains; Potash, Acetate of, 1 scruple to 3, Carbonate, 10 grains to 30, Nitrate, 5 to 10 grains, Subcarbonate 10 grains to 3, Supertartrate (Cream of Tartar) 2 drachms to one ounce; Spirits of Nitric Ether (Sweet Spirits of Nitre), $\frac{1}{2}$ a drachm to 2 drachms; Tar-water, $\frac{1}{4}$ to $\frac{1}{2}$ a pint; Turpentine, 5 drops to $\frac{1}{2}$ a drachm; Gin; Common and Chalybeate Waters, &c. Among the wild plants possessing diuretic properties, the Broom and Dandelion may be mentioned as the most common, and therefore accessible to persons in this country. (For a full account of the former, see *Dandelion*; of the latter, *Genista*). Gin, Spirits of Nitre, and Turpentine, may always be readily procured, and are as certain in their operation as any; but they should not be taken where there is much tendency to irritation. Infusion of raw coffee berries also acts on the urinary secretions, as does any strong mental emotion, such as joy, fear, &c., and nervous affections, such as hysteria; after bleeding, too, and the action of purgatives, there will frequently be an increased flow of urine.

DIVARICATION (Latin *divarico*, to straddle). Applied to the bifurcation or forked division of a vein or artery, &c.

DIVERTICULUM NUCKII. The opening through which the round ligament of the uterus passes.

DODDER. The *Cuscuta Europæa*, a native



parasitic plant, sometimes used in visceral obstructions, and intermittent fevers.

DOGBANE. The *Apocynum Androsæmifolium*, a plant of the natural order *Apo-cynææ*; most of the species contained in



which are poisonous. The above is very rarely used; the powdered root, in doses of 30 grains, forms a powerful emetic.

DOGWOOD. A plant whose scientific name is *Cornus Circinnata*, the bark of which



has been recommended as a substitute for Cinchona: dose of the powdered Bark, 1 to 3 scruples; Infusion, 1 to 2 ounces; Decoction, wineglassful.

DOG ROSE (Latin *Rosa Canina*). Sometimes called *Cynosbatum*. The ripe berries are termed Heps or Hips, and are used for making a confection (*Confectio Rosæ Caninæ*) which is chiefly valuable for the formation of pill masses, and as a vehicle for other medicines; it has been sometimes given as an astringent in diarrhoea and dysentery.

DOLICHUS PRURIENS (see *Cowhage*). The stiff hairs of the pods of this plant to which it owes its virulent properties are called *Doliehi Pubes*.

DOREMA AMMONIACUM (Greek *dorema*, a gift). See *Ammoniacum*.

DORSTEMA CONTRAYERVA. See *Contrayerva*.

DORSUM (Latin the *Back*). Hence comes the term *Dorsal*, appertaining to the back, applied to a region, ligaments, arteries, &c. The designation of the back of the neck is *Dorso Cervical*: see *Back*.

DOSE (Greek *doxis*, from *didomi*, to give). A determinate quantity of anything given or administered at the time, generally applied to medicine; the rule with regard to which is, that the doses of most medicines must be diminished in proportion to the age, thus.—Age 1 to 2 months, 1-15th to 1-24th of a full dose; 6 months, 1-8th; 12 months, 1-5th; 2 years, 1-4th; 5 years, 3-8ths; 8 years, 1-half; 12 years, 5-8ths; 16 years, 3-4ths; 20 years, 7-8ths; 25 to 40 years, full dose; 50 years, 7-8ths; 65 years, 3-4ths; 80 years and upwards, 5-8ths. About 1-4th less should be given to adult women than men; other circumstances, such as individual temperament, constitution, habits, &c., must be taken into account. It must also be borne in mind that the above rule will not apply to all medicines—that, while Calomel, and many purgatives, can be taken in larger doses by children than adults, Opium, on the contrary, affects the young more powerfully, even when given according to the above rate of reduction, and must therefore be diminished considerably below it. See *Apothecaries' Weights, Prescriptions*.

DOUCHE (French). The affusion of water from a considerable height. Dr. Lec, in his *Baths of England*, says “Douches are of various kinds—the *ascending*, the *lateral*, and the *descending*—the water in the first kind falling from a reservoir, at a greater or lesser height, upon the patient in a single or divided stream, the size of which may be varied according to circumstances. The lateral Douche is produced by a man pressing the water through a tube, as with a fire-engine, the stream being directed against the body that is indicated. The strength of

this can be regulated by the attendant's pumping with a greater or less degree of force, and also by a finger placed over the aperture, by which the stream is divided. In the ascending Douche the column of water is directed upwards, and is usually taken in a sitting position; this Douche is almost exclusively employed in complaints of the organs within the pelvis." Douches are directly exciting remedies, and are mostly used to produce a greater degree of vitality and activity in parts, as in cases of local debility, serofulous swelling, muscular rigidity, paralysis, contracted joints, neuralgic pains, &c. They are mostly administered while the patient is in the bath, and are often advantageously combined with friction. The employment of the Douche requires to be carefully superintended. See *Bathing, Hydropathy*.

DOVER'S POWDER. This is the Compound Ipecacuanha Powder of the Pharmacopœia, it is composed of Ipecacuanha, Opium, and Sulphate of Potash, in the proportion of 1 drachm of each of the first and second ingredients, to 1 ounce of the last; it is a good diaphoretic, and is much used in rheumatism, dropsy, gout, fevers, dysentery, diabetes, &c. The dose is from 5 grains to 20, taken generally at bedtime. See *Diaphoretics*.

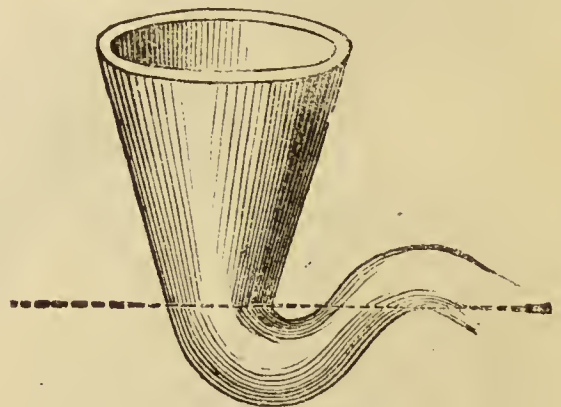
DRAGANTIA. A mucilage obtained from *Gum Tragacanth*, (which see).

DRAGON'S BLOOD (Latin *Sanguis Draconis*). A brittle, dark red-coloured resin, which comes from the East Indies, and is the product of the *Pterocarpus Draco* and *Dracœna Draco*; it contains a small proportion of benzoic acid, but is not much used except as a colouring ingredient. A precipitate, formed by mixing cold water with a concentrated solution of this gum, is termed *Dracine*.

DRAINAGE. As, in a sanatory point of view, this is one of the most important of subjects, we make no scruple about introducing it here. "The most prolific source of disease in towns," says Mr. Grainger in his pamphlet published by the Health of Towns Association, "is, certainly, defective drainage and sewerage;" and Mr. Guthrie, when examined before the Sanatory Commission said, "My attention has been more especially directed to private drainage, or the sewerage of individual tenements; for I am satisfied the public health is more deleteriously influenced by the exhalations which arise from pent-up matter in them, than by those which issue from the great main or common sewer." This being the case it behoves all who value health, (and who does not?) to look

well to the drainage of their own particular habitations, and to that of the locality in which they reside. Medical practitioners well know that not only are peculiar types of disease set up by the bad state of the atmosphere arising from defective or deficient drainage, but that all diseases occurring in badly-drained localities, are more difficult of treatment; indeed, there is a general deterioration in the public health, a loss of vigour and stamina in the constitutions of those who are constantly inhaling poisonous gases, which renders them less able to resist the attacks of disease, or to recover from the effects of any shock or strain which the system may have to bear. Thus, in badly drained districts, recovery from child-birth will be more slow and protracted; cuts and wounds more difficult to heal; fevers will be more prevalent and virulent, strumous affections more general and obstinate, and all the ills to which the flesh is heir more rife and formidable than elsewhere. Well may it therefore be said—Look to your drainage; see that your cesspools are well constructed, and that the matter in them is not allowed to accumulate too much, nor the exhalations from them to escape where it is likely to enter into the composition of the atmosphere breathed by human beings. For house drains, circular tubes to run into a main sewer are recommended by the best authorities; they should be of an oval shape, from three to six inches in diameter, glazed in the inside, with a sufficient downward inclination to convey off the fluid which passes into them; gratings and gutters are only placed where absolutely necessary to carry off surface water, and those

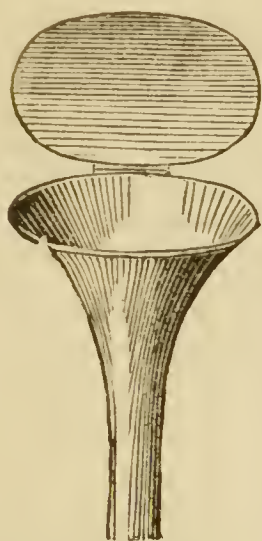
A



should be trapped. All water closets and sinks should be so constructed as to allow no effluvia to escape, by means of earthenware soil pans, with syphon pipes (see diagram A), which may now be fitted at a trifling cost. Where a sink cannot be had, a funnel-shaped pipe with a cover (B), fitted

into the floor, and communicating with a drain, is the best substitute. In calling the

B



attention of our readers to this most important subject, we have but performed a public duty; into the whole subject of drainage it would be manifestly impossible for us to enter, and we therefore refer those who may desire further information upon it to the excellent publications of the Health of Towns Association, which are cheap and easily accessible. See *Air, Infection, &c.*

DRASTICS (Greek *drao*, to effect). Purgatives which are powerful in their operation, Croton Oil, Elaterum, Jalap, and Seammony are those which are principally used. See *Cathartics*.

DRAUGHT (Latin *haustus*), a liquid form of medicine, differing from a mixture only in quantity, which should not exceed an ounce and a half, or a wineglassful; it is taken at once, or as we say at a draught; the most familiar form of this is perhaps the Black draught, which may be thus prepared: On 1 ounce of Sulphate of Magnesia, 1 drachm of Senna leaves, and the same of grated Ginger, pour half a pint of boiling water, let it stand until cool, and strain, it will yield sufficient for four draughts; it may be made more aromatic by the addition of a Clove or two, a small piece of Spanish Liquorice will greatly assist to disguise the nauseous taste of the salts.

DREAMING. Is the occupation of the mind during sleep by a series of thoughts, or train of ideas; or a wakeful and active condition of some of the faculties of the mind, while others are perfectly dormant. In a psychological, or to speak more plainly, a mental point of view, this is an extremely interesting subject; but we have only here to do with it as far as the body is concerned. Of the great influence exercised by the body, in its several states and conditions, over the mind,

we need no stronger proof, than is afforded by the phenomena of dreams, the cause of which may be commonly traced to some functional derangement or other; thus, from indigestion comes nightmare, and all who have had anything to do with children know full well that disturbing dreams are common indications of disorder of the bowels and stomach; so organic disease, such as that of the heart, or anything which causes oppression at the chest, will frequently give rise to incubus, and visions of a distressing character, as also will a blister, or aught which occasions painful and uneasy sensations of the body. When children are much given to dreaming, they are generally troubled with worms, or some visceral obstruction; and one or two smart purgatives will often relieve the symptoms. When dreaming is the result of great mental labour, or excitement during the day, a temporary relaxation, with more physical exertion may be recommended, and the use of the shower bath; sea bathing, or anything which will divert the thoughts, and brace and energize the system. See *Sleep*.

DRESS. It is desirable that we should say a few words here upon the important subject of clothing, than which nothing is more intimately connected with health; especially is it necessary in this variable climate to protect the body by proper coverings, alike from excess of cold and heat, but more particularly the former, and childhood is the period of life in which the greatest attention should be paid to this, because at that time the seeds of diseases are often sown, which render painful, if they do not shorten, the after existence. It is thought by many persons best to bring up children hardy, and to this end they are doused and washed in cold water, all the winter through, and their tender chests, and arms, and legs are exposed, to all the inclemencies of the weather! If they are really strong children, they may survive this treatment, and become robust men and women in spite of it, not because of it; we have seen the failure of so many experiments of this kind, that we are quite convinced that the system is a pernicious one; we are not living in a state of nature now, but a highly artificial state, and we cannot safely bring up our children as savages would theirs. Look at the North American Indian, say the advocates of this system, how tall and straight he is, how supple his limbs, how agile and graceful his motions, he fears neither heat nor cold—you don't hear him wheezing, and coughing, and panting, at every little exertion; how easily he climbs into the highest trees, and dives far beneath

the surface of his sea-like lakes and stately rivers; what hunger and fatigue he endures. True, but you see here only the finest specimen of the race: he was enabled to endure the rough treatment to which he was subjected in childhood; but you see not, you know not of, the number of weakly children who have not been able to endure this treatment, but have died in consequence of it, even if they have not been killed by their parents, or left to perish uncared for, because they gave no promise of the necessary strength and stamina to go through the preparatory training for a forest life. But the truth is, we are not North American Indians, neither are we woad-stained, skin-clad Britons; we have passed the state of rude barbarism, and got into one of civilization and refinement: we don't want to kill off our weakly and rickety children even; because, apart from all considerations of the immortal souls within them, we believe that they may grow up very useful members of society, even if they possess less than the usual share of health and bodily strength; so we do not, generally speaking, subject them to the hardening process, but carefully clothe and protect them, as much as may be, from malign atmospheric influences; and to this end we cover their little chests with flannel—nothing like that—and keep their feet warm in winter, with lambswool socks, and their hands and wrists with woollen gloves and muffitees; and we put them on good and sufficient head coverings, and body coverings, outer and inner; as many as may be sufficient to prevent their getting chilled by the nipping blast, and wetted by the driving shower, from which, and the dense fogs and vapours, which are so rife with us at certain seasons, we take especial care to guard them. And, although all through the summer we wash, and sponge, and bathe them in cold water, yet in the early spring, and late in the autumn, and certainly in the winter, we think it best just to take the chill off the water in which their ablutions are performed, and not send them abroad at morning, nor to bed at night shaking and quaking; for we know that all this soon tends to coughing and sneezing, hollow eyes, and sunken cheeks, and perchance *an early grave*. Would we bring up our children effeminately then? by no means, we would have them neither savages nor Sybarites, and we think that the mode of treatment here indicated, more likely than any other to render them as strong and healthy as their original constitutions, and the existing causes of disease to which they are necessarily subjected, will allow them to be. Much, very much, might

be said about dress, considered in a sanatory point of view; it may vary greatly in form and material, as the fashions vary, but a general principle should be kept in view throughout all its mutations. There are certain parts of the human body that should never be exposed to the danger of a sudden chill; we may mention the cavities of the chest and abdomen, as especially to be guarded; the low dresses worn in ball rooms and theatres are not simply indelicate, they are extremely dangerous; the fair wearers are so frequently exposed to draughts, and cold currents of air, in leaving the scene of festivity, or passing from room to room, that they are very likely to contract pulmonary diseases; there is danger, too, in the preposterous skirts kept out by means of hoops, at present worn, unless the under clothing be warm, and close-fitting; but without any profane attempt to penetrate into such a sacred mystery as this, let us hope that it is so. We cannot leave the subject of dress without alluding to *tight lacing*, although under that head, and *stays*, we shall have a future opportunity of animadverting upon it. When the old sculptor embodied his ideal of female beauty and perfection of form in the Medicean Venus, he had no thought, that in future ages, the fair daughters of Eve would become so enamoured of distortion, as to compress their waists to half the natural size, forgetting that by so doing they prevented the proper working of the delicate machinery within. The country women of Praxiteles did not so run counter to nature's laws, and we tell our countrywomen, of this enlightened nineteenth century, that to slit their noses, and lengthen the lobes of their ears, like certain wild tribes of the far-away islands, would be no more unreasonable, and far less prejudicial to health, than is this custom of girding in the waist until a woman looks like a wasp.

Generally speaking, children in this country are not sufficiently protected from the weather; very frequently they wear no flannel under garments, which are of more consequence than outer coverings; for this reason it is we have so much croup, inflammation of the lungs, and scrofula amongst us; the neck and throat is insufficiently guarded most commonly in persons of all ages, and this exposure is a principal source of bronchial affections: it remains to be seen whether the practice, now prevalent with men, of allowing the beard and whiskers to remain uncut, will tend to diminish this class of diseases; we are inclined to think that it will.

DRESSING OF WOUNDS, &c. As this subject will be more fully entered upon under

the special heads of *Wounds, Cuts, &c.* (which see), we need here only lay down a few general principles in relation to the most approved methods of dressing, which, although at one time very formidable and complicated, have of late become very much simplified. No person can be a good dresser who has not a firm and light hand, and a large stock of patience. The parts which require his aid are usually extremely sensitive, and the patient probably weak and irritable; the process, therefore, should be conducted throughout with great caution and tenderness. All the necessary preparations and apparatus should be within reach, and in good working order, so that the part need not remain exposed longer than is necessary. The usual requirements are some strapping plaister, cut up into strips of the necessary breadth and length; some lint, bandage, sponge, and warm water; a pair of sharp, curved scissors, and of forceps like these here represented, a piece of caustic in



a quill; a probe, and, indeed, all the instruments usually found in a surgeon's pocket-case. The old bandage should be first carefully unwound, and the lint or rags removed, if any should be on; then dip the sponge in the warm water, and squeeze it out over the part, to moisten the plaister thereon, which will most likely have become hard and adherent. When this is done sufficiently, take the forceps, and with the tips of them turn up the plaister at the outer edges, and, beginning there, slowly and carefully lift the pieces, so that the centre cut, or wound itself, is the last place from which they will come away. There is often much difficulty in effecting the entire removal of this, and recourse must be had again and again to the wet sponge. When the whole of the dressing is away, and the part cleansed, apply the caustic, or whatever may be necessary; then the fresh plaister or suitable dressing; and then bandage up, wetting first the lower part of the bandage, and afterwards, should there be much inflammation, saturate the whole dressing with plain water, or lotion, as may be required. The plain-water dressing alone is that which is now very commonly used. It consists of a piece of linen rag, or lint, folded several times, and dipped in cold or tepid water; place it over the affected part, and cover it with a piece of oiled silk, or other waterproof material, to prevent rapid evapo-

ration; the rag must be moistened afresh as often as it gets at all dry. This is a much more cleanly and, generally speaking, a more effectual application than ointment or other greasy material, and is recommended alike by its simplicity and cheapness.

DRINKS. Fluids taken for the purpose of quenching thirst, or to gratify a particular taste, or an inclination for stimulants, or to answer some sanatory purpose, are, as our readers well know, so called: they may be *simple* as water, which is, no doubt, the natural drink of man, and all which, in a perfect state of health, he really requires—*medicated*, as mineral, alkaline, and acidulated waters, either natural or artificial; *nutrient*, as milk, barley and toast water, &c.; or *stimulant*, as tea, coffee, and alcoholic drinks. It is impossible, however, to make a strict classification of them, as many drinks might be placed under two or three of the above heads—some wines and malt liquors, for instance, are taken both on account of their stimulant properties, and as medicines; tea and coffee are also, to a certain extent nutrients, especially when they contain much milk and sugar; and this is the case with all beverages into which the saccharine principle enters, as it, of course, does largely into the *Eau sucre*, to which the French, are so partial. More upon this subject will be found under the heads of *Aqua, Ale and Beer, Beverages, Diluents, Coffee, Tea, &c.*

DRIPPING. The fat which exudes from meat in the process of cooking is so called; it is useful for a variety of household purposes, often entering into the composition of piecrust, and pastry in general: some persons like it spread upon bread, and those who have good digestive powers may take it in moderation without injury, if not with advantage. We should, perhaps, not have noticed it here, but that we would warn our readers against pouring it when very hot, or remelting it, in newly-glazed earthen vessels, or those which have copper in their composition; as, in the former case, the lead glaze, and, in the latter, the more poisonous mineral, is, to a certain extent, soluble in the fatty matter, and symptoms of poisoning have been induced by partaking of dripping so prepared.

DRIVELLING or SLAVERING. An involuntary flow of saliva, common in infancy and old age, and also in some other states of weakness and imbecility; it proceeds from a want of command over the muscles of deglutition. There is no remedy for it, except strengthening the system as much as possible with good nourishing food, and in case of sick-

ness, endeavouring to remove the cause from which the debility proceeds.

DROPS (Latin *guttæ*). A form in which powerful medicines are often prescribed; when the corresponding quantity is measured *minims* is the term applied. See *Apothecaries' Measure*.

DROPSY (Latin *hydrops*, from the Greek *udor*, water, and *ops*, the look or aspect). This not uncommon form of disease is an effusion into the cellular tissue, or any of the natural cavities of the body. When the epithet encysted is added, it signifies a collection of serous fluid in a cell, of which the ovarium is usually the seat. The medical profession distinguish Dropsy by several names, according to its several stages, or to the parts affected by it; thus, before the disease is fully developed, it is termed *Cachexy*; when the lymph or watery fluid is accumulated in the cellular membrane it is *Anasarea*; when the accumulation is in the abdomen, it is *Ascites*; when in the chest *Hydrothorax*; when in the head, *Hydrocephalus*; when in the womb, *Hydrops Uteri*; when in the scrotum, *Hydrocele*. There are many predisposing and exciting causes of Dropsy, among which may be named hereditary tendency, phlegmatic temperament, scanty secretion of urine, excessive discharges of any kind, or suppression of customary evacuations, exposure to a moist atmosphere, the striking in of eruptive disease, taking indigestible food, excessive drinking of watery fluids, or of spirituous liquors; certain forms of inflammatory, eruptive, and other disease, such as scarlet fever, jaundice, diarrhoea, dysentery, consumption, gout, chronic intermittents, all of which cause increased effusion, or diminished absorption, or both united. There are also many local affections which are likely to produce Dropsy, but on these we need not dwell, nor can we, in a work like the present, do more than indicate the general *Symptoms* and *Treatment*, leaving it to the professional adviser to investigate the peculiarities of individual cases, and prescribe the appropriate remedies. In Dropsy generally, then, we observe, there is in the first place, a swelling of the feet and ankles, especially towards evening; this tendency to increase in size gradually creeps upwards, affecting first the thighs, and then the whole of the body; the cheeks and eyelids become puffy and swollen; the eyes lose their lustre, the skin becomes sallow, water often oozes through the pores of the cuticle, or raises it in the form of small blisters; there is a torpid heaviness, frequently a troublesome cough, costiveness, insatiable thirst; the flow of urine is irregu-

lar—sometimes small in quantity and high-coloured, depositing a reddish sediment, and then again lighter-coloured and more copious, but nearly always thick or cloudy; there is want of rest, burning fever, and general languor and debility.

The *Treatment* consists in evacuating the collected fluid by scarifications, blisters, friction, emetics, and nauseating medicines, Tartarized Antimony and Squills being the most effectual. Diuretics, such as the Acetate and Supertartrate of Potash, Cantharides, Colchicum, Digitalis, Spirits of Juniper, and Nitric Ether, Broom, Horseradish, Mustard Seed, &c. Diaphoretics, such as Dover's Powder, Antimonials, Camphor, assisted by tepid diluents; the vapour bath, and water impregnated with the Muriated Tincture of Iron; Mercury also should be administered, in small doses, repeated until they just affect the mouth; bandages round the abdomen and legs; a light nourishing diet, with pungent aromatic vegetables, such as cresses, garlic, mustard, onions, &c. regular exercise, cold bathing, and tonics such as Cascarella, Cusparia, Quassia, Quinine, and preparations of Steel. Such is an outline of the treatment of Dropsical patients, but it is very seldom that a cure can be effected; it comes to tapping at last, and this has to be repeated as often as the fluid collects in such quantity as to render it necessary. We are here speaking of confirmed Dropsy in adults; that which affects children after the measles, scarlet fever, &c., is generally curable if the proper measures are adopted.

DROWNING. As this is an accident of not unfrequent occurrence, and is moreover one in which prompt means are of the utmost consequence, it is desirable that we should enter somewhat fully into the mode of treatment to be adopted, in the event of no professional help being obtainable. And first, let us explain what drowning really is, for although most persons are aware that it is, as the dictionaries have it, "suffocation by immersion under water," yet few, perhaps, are aware of the exact process by which the grim destroyer, Death, accomplishes his end in this particular case; and to understand this will greatly assist the intelligent reader in his application of remedial means.

When any warm-blooded animal is immersed in fluid so that the lungs cannot obtain the supply of oxygen from the air which is necessary to render the blood fit for the purposes of life, the result must be a cessation of the vital functions—a suspension, temporary or permanent, of all the operations of existence; this state is called *Asphyxia* (which see.) The first effort of a drowning person

is to breathe; a forcible expiration of air takes place, which contracts the lungs, and an attempt at respiration immediately follows, but this is rendered impossible by the interposing water; again the effort is repeated, and a few bubbles of the air thrown out rise to the surface, but none returns to supply its place; the blood is passed back to the heart of a dark colour, being loaded with carbon; sensibility and the power of voluntary motion begins to diminish, and quite ceases directly the arterial blood has lost its bright red colour, and become wholly venous. It is calculated that about one minute and a-half of total submersion is sufficient to affect this change, and to extinguish animal life. But by prompt and vigorous measures, it has been found possible to restore suspended animation, because the organic functions go on for a considerable time after apparent death, which is not real until those functions have wholly ceased; thus it is often with persons in a trance, or state of coma, exhibiting no signs of animation for a time, and yet eventually recovering the entire use of their limbs and faculties. The struggles of a drowning person, although undoubtedly violent, can be of but short duration; if unable to swim, and the fall into the water is from any height, he goes at once to the bottom, unless it is in very deep water; but, going down with inflated lungs, and a considerable quantity of air in his clothes, he soon rises again although he does not probably get his head far enough above water to inhale much air, in the hurried gulp which he is permitted to make before he sinks again; he will probably come to the surface, or near it, a second, and a third time, but will, at last, sink to rise no more, until his body, by the gases generated in it by the process of decomposition, is rendered lighter than the surrounding fluid, and so rises and floats a swollen and bloated corpse. In the violent efforts at inspiration which are made, some water must be swallowed, but not anything like the quantity that is generally supposed, little or none of it gets into the lungs or stomach. There is always some of it, mixed with frothy mucus, and sometimes with blood, in the trachea and bronchial passages, and this gives rise to the supposition that the body is full of water; to get rid of which it was once the barbarous custom to suspend drowned persons by the heels, a sure method of preventing a restoration from a state of asphyxia. The irritation of the glottis, excited by the unsuccessful efforts to breathe, and the rush of water directly the mouth is opened, especially if it be salt water, is so

great, as to cause a strong cough, which expels the fluid, and when animation is altogether suspended, the passage is closed. It is generally agreed by the best authorities that, after four minutes of total immersion, there is little chance of restoring a drowned person to life, however instantaneously, actively, and judiciously the necessary means may be employed. There are, indeed, well-authenticated cases on record of recovery after five, six, ten, and even fourteen minutes immersion; but these are rare exceptions, and it may well be doubted whether, in these cases, the immersion was total and uninterrupted. Still it is but to give the patient the benefit of this doubt, and make a prompt and persevering effort to restore him to life, although he may have been in the water much longer than even the longest of the above-named periods; it is possible that he might have been able, by swimming, or taking hold of some floating substance, to keep his head above water for a time, or to obtain a partial supply of air by lifting it occasionally. External warmth, artificial respiration, friction, and electricity are the four great agents to be employed in the recovery of drowned persons: let the body as soon as possible—everything depending on promptitude and energy—be removed to some convenient place, the warmer the better, wrapped in blankets, and laid out on the floor, or a bedstead, which being somewhat raised, will give greater facility for the necessary operations; of course to strip off the wet clothes will have been the first of these; this should be done as soon as possible after the body is taken out of the water, and, if its removal to any distance is necessary, care should be taken to keep the head and shoulders well up, neither allowing the former to hang down backwards, nor to fall forwards on the chest. The patient then being placed on his back, with the fore part of the body raised by means of an inclined board, or pillows, the first care should be to free the mouth and nostrils of all obstructions, next, to apply warmth to any available part of the body; hot bran, salt, or sand to the extremities; hot flannel to the chest, abdomen, and sides, with stimulant liniments and plenty of friction; Camphorated Oil, Olive Oil with Brandy or Turpentine, or Spirits of Hartshorn, make the best liniments, and they should be rubbed on warm with flannel; then, too, efforts should be made to bring the respiratory system into play; not according to the old method, by thrusting bellows up the nostrils, or into the mouth, and so filling the stomach with wind, but by alternate pressure and re-

laxation of the ribs and parts adjacent, so as to imitate the motion caused by breathing. Electric shocks, slight at first, and gradually increasing in intensity, should also be passed through the upper portion of the spine and the chest, supposing the appliances are at hand for doing this; these are, however, but subsidiary means—external warmth and friction are mainly to be relied on, and these should be persevered in for several hours if necessary; strong smelling Salts, Hartshorn or Liquor of Ammonia, may from time to time be applied to the nostrils, and a stimulant clyster be thrown up the anus, consisting of warm gruel with a table spoonful of Spirit of Turpentine, or double the quantity of Brandy. As long as unconsciousness continues, no efforts must be made to introduce anything by the mouth, but as soon as there is a natural action of the lungs, and heart, a perceptible pulse, and other symptoms of returning consciousness, a tablespoonful of Brandy, with about the same quantity of hot water, should be given, and this dose repeated every half-hour or so, until the patient is sufficiently recovered; he may then be placed in a warm bed, wrapped well in blankets, with hot applications to the feet if they still remain cold, and kept quiet for a time; he will most likely sink into a slumber, more or less disturbed, according as his brain and nervous system are able to shake off the effect of the violent shock which they have received. We should have mentioned above that a warm water or vapour bath, if either can be had, are very useful auxiliaries in such a case. As an incitement to long-continued exertion, we may mention that the recovery of a drowned person has been effected after a perseverance in the necessary means for four, six, and even eight hours. After recovery, it is likely there may be considerable congestion of blood about the brain which will require cupping or bleeding, but that must be left to the judgment of the medical man. If stimulants are considered necessary they must be given with great caution, and there must be an avoidance of all undue excitement; the diet should be nourishing but easily digestible: *quiet* is the great desideratum.

DROWSINESS. The unusual tendency to sleep, which is so called, may be symptomatic of congestion of the brain, of typhus or other fevers affecting the head, of threatened epilepsy, of excess of bile, or of general debility. Old persons are commonly drowsy, and will pass the greater part of their time in sleep, unless there be some active disease which pains or annoys them. It is generally desirable to let them sleep on, and take the

prolonged rest which their infirmities require. But with the young and vigorous it is different; this symptom should be regarded with suspicion and alarm, and an inquiry instituted into its probable cause. (See the diseases above enumerated, *Rest* and *Sleep*).

DRUGS. This term is generally applied to the commercial products employed as medicines in the crude or natural state, the vendors of which are termed *Druggists*. These substances vary greatly in price and quality, and it requires an accurate knowledge—only to be acquired by close observation and long experience—to distinguish which are the better kinds, and to detect the sophistications to which they are subjected. (For more on this head see *Adulterations*, and the several articles included under the term *Drugs*).

DRUM OF THE EAR. This is the inner portion of the organ of hearing, which contains the small bones, and across which is stretched the other membranes, by means of which sounds are transmitted to the brain. See *Ear*, *Tympanum*.

DRUNKENNESS. Of this great-prevailing vice of the people of our own, and some other countries—this fruitful source of misery and ruin—more will be said under the heads of *Intemperance* and *Intoxication*.

DRY CUPPING. The application of exhausted glasses to any part to which it is desirable to draw the humours of the body, and to relieve the seat of disease near at hand. In this process the scarificator is not used; therefore, no openings are made for the escape of the fluid; hence the term dry. See *Cupping*.

DUCTUS (Latin *duco*, to lead). A duct or passage by which anything is led or conducted, applied here to a tube through which any fluid of the animal body passes, as *D. hepaticus*, the main channel, so to speak, formed by the union of the smaller ducts of the liver; *D. cysticus*, the duct which passes from the neck of the gall bladder into the above-named; *D. communis choledochus*, the bile duct formed by the junction of the cystic and hepatic; *D. pancreaticus*, the pancreatic duct which joins the gall duct at its entrance into the duodenum; *D. arteriosus*, a tube which, in the fœtus, joins the pulmonary artery with the aorta; *D. venosus*, a branch which, in the fœtus, joins the left *Vena hepatica* with the umbilical vein; *D. nasal*, or *lachrymal*, a duct continued from the lachrymal sac and opening into the nose; *D. incisoriū*, a continuation of the *Foramen incisoriū* between the palatine processes into the nose; *D. thoracicus*, the

great trunk formed by the junction of the absorbent vessels; *D. ejaculatorius*, a trunk within the prostrate gland opening into the urethra; *D. of Sterno*, the excretory duct of the parotid gland; *D. of Wharton*, the excretory duct of the sub-maxillary gland, (these two last, with the sub-lingual, constitute the salivary ducts); *D. of Bellini*, the orifices of the uriniferous canals of the kidneys.

DULCAMARA (Latin *dulcis*, sweet; and *amarus*, bitter). The Woody Nightshade or Bitter Sweet, the *Solanum Dulcamara* of botanists, belonging to the natural order *Solanaceæ*, the dried twigs of which are



sometimes used medicinally, being regarded as alterative, diuretic, sudorific, and mildly narcotic; it is used in skin diseases and catarrhal affections; also in scrofula, chronic rheumatism, and syphilis; the dose being—of the Powder, from 1 to 3 scruples; of the Decoction, about a wineglassful; of the Extract, from 5 to 10 grains; of the Syrup, half an ounce to an ounce. This plant is nearly allied to the potatoe, which it very closely resembles in the odour of its root. It grows wild with us in roadside hedges, and especially affects those near ponds or streams of water; its twining stems often reach to the height of five or six feet; its purple and yellow blossoms and bright scarlet berries closely resemble those of the deadly Nightshade; and children are said to have been

poisoned by eating the berries; as have grown persons from an overdose of the decoction of the fresh twigs, which, in the country, are still extensively used. There are, however, many safer and better remedies. We give a cut of the plant for comparison with that of its more poisonous relative. (See *Atropa*.) For making the decoction, the twigs should be gathered whenever as thick as a goose-quill; 1 ounce of them, chopped up, to be boiled in a pint and a-half of water, until reduced to half the quantity.

DULCEDO SPUTORUM. A name given to that form of *Ptyalism* (which see), in which the spittle has a sweet or mawkish taste; it is more commonly known as *Sweet Spittle*.

DUMBNESS. Want of power to utter or articulate sounds, proceeding either from some defect in the organs of speech themselves, or the nerves in obedience to which they move and act. Dumbness is very commonly the effect of complete deafness, dating from birth, or from so early a period of life that the powers of speech have never been exercised, and are therefore perfectly useless to the possessor. See *Speaking, Speech*.

DUODENUM (Latin *duodeni*, twelve). The twelve-inch intestine, or that portion of the small intestines which is immediately connected with the stomach. See *Alimentary Canal*.

DURA MATER (Latin for hard mother). This is the outer membrane of the brain, so called because it was formerly supposed to give origin to all the other membranes of the body; it is firm, white, and fibrous, being attached to the interior of the skull, between it and which, however, extends the fine arachnoid membrane which lines the dura mater, and also covers the brain, forming a kind of double sac, enclosing a watery fluid. The inner surface of the dura mater forms several folds, which are named—1st, *Falx Cerebri*, between the two hemispheres of the brain; 2nd, *Tentorium Cerebelli*, which separates the cerebrum from the cerebellum; and 3rd, the *Falx Cerebelli*, which passes between the lobes of the cerebellum. The sinuses of the dura mater are eleven in number; we need not give their names; they are the channels or hollows through which pass the larger veins of the *Brain* (which see).

DUTCH DROPS. This popular nostrum, which was at one time largely imported from Holland, and is still so to some extent, is understood to have for its basis the residue of the redistillation of oil of turpentine: it is now chiefly made in this country, according to several formulas. The following is as simple and easy as any, and perhaps

approaches as nearly as any to the genuine Dutch form:—Oil of Turpentine and Spirit of Nitric Ether, of each 2 ounces; Tincture of Guaiacum, 1 ounce; Oil of Amber and Cloves, of each $\frac{1}{2}$ drachm—a teaspoonful of which three times a-day. It is a good diuretic and stomachic, and is useful in rheumatism and dropsy. As an outward application to cuts we cannot recommend it, although it is much used for this purpose.

Dys. A Greek adverb, signifying with difficulty. From this root come the names of several important diseases, such as—

DYSÆSTHESIA. Impaired feeling or perception. See *Æsthesia*.

DYSCATOPSIA. Difficulty of swallowing liquids; a term sometimes applied to *Hydrophobia* (which see.)

DYSCHROA. A discoloured state of the Skin (which see).

DYSCINESIA. Imperfect motion, which may proceed from various causes, such as *Paralysis* (which see).

DYSCRASIA. A morbid state of the constitution, arising from some vitiatory or imperfect assimilation of the blood.

DYSECÆA. Impaired hearing (which see), sometimes called *Cophosis*.

DYSENTERY (Greek *entera*, the bowels). Inflammation of the mucous membrane of the large intestines, causing frequent evacuations of a peculiarly foetid matter, consisting of a large proportion of mucus, generally more or less mixed with blood. *Flux*, or *Bloody Flux*, according as the discharges are free from, or deeply tinged with, the sanguineous fluid, are common names for this disease, which some French writers term *Colite*.

The *causes* of the inflammatory action may be a specific contagion; great moisture in the atmosphere succeeded by sudden heat; putrid or otherwise unwholesome food; noxious vapours and exhalations; ulceration of the colon, resulting in spasmodic constriction.

The usual *symptoms* are cold shiverings and other febrile signs; there may be at the outset unusual costiveness, with flatulency, severe griping and frequent inclination to go to stool: then comes loss of appetite, nausea, and vomiting, an increase of the febrile heat, copious evacuations as above described, which reduce the strength, and cause great emaciation.

The proper *treatment* will be first with regard to the accompanying fever; if it be of the inflammatory kind, and the patient can bear it, there must be blood-letting, antiphlogistic medicines, and low diet; but very commonly the fever assumes a putrid cha-

raeter, in which case it must be treated as *Typhus* (which see). If it becomes *intermittent*, tonics must be resorted to as prescribed under that head. (See *Fevers*.) With more immediate reference to the disease itself, the seat of which is the intestines, an emetic, consisting of 20 grains of Ipecacuanha Powder and 1 grain of Tartarized Antimony, followed by copious drinks of warm water, should be given, and as soon as the vomiting ceases, a powder, composed of 1 scruple of Powdered Rhubarb and 2 grains of Calomel, or a full dose of Castor Oil, or some refrigerent cathartic, such as Epsom, or Glauber's, or Cheltenham Salts. Ipecacuanha alone, in doses not sufficiently large to produce vomiting, say 5 grains, frequently given, often acts well as a cathartic in Dysentery. After this administer emollient glysters about three times a day, with Laudanum about a drachm in every third one, or glysters of Mutton-broth and Arrowroot. For drinks, which should be cold, or nearly so, give solutions of Gum Arabic, or Milk, decoctions of Linseed, Salop, or Barley, or thin Arrowroot. If these do not stop the flux in 24 hours or so, try the following mixture:—Tincture of Opium and Nitrate of Potash, of each 1 drachm; Antimonial Wine 2 drachms; Mint Water, to make 6 ounces, take a tablespoonful, every two or three hours. When the disease has yet more advanced, and the frequency of the stools appears to proceed chiefly from a weakened and relaxed state of the bowels, tonics and astringents should be given, Arnica, Bark, Calumba, Cascarilla, Catechu, Logwood, Kino, Quassia, are among the best; Lime Water is also good, and an acidulous mixture composed thus:—Diluted Nitrous Acid 2 drachms, Laudanum $\frac{1}{2}$ drachm, Water 6 ounces; take a sixth part every four hours. This also will be found efficient:—Tincture of Catechu, Confection of Opium, and Aromatic Confection of each, 2 drachms; Cinnamon Water, 6 ounces; take two tablespoonfuls every four hours. Where there is much debility, Brandy-and-Water may be given; but neither this nor Laudanum will do for the febrile stages.

Persons residing in warm climates are especially subject to Dysentery; few Europeans who go to the East or West Indies escape it, and frequently among the natives of those countries it becomes very prevalent and fatal; this is especially the case in the rainy season. Those who are recovering from its attacks should be careful to avoid exposure to cold or damp, or any sudden atmospheric changes; to be regular in their

mode of living, and to go warmly clothed, as they are very liable to a recurrence of the attack.

DYSMENORRHŒA. Difficult or painful menstruation (which see).

DYSODES. Having a bad smell. A term applied by Hippocrates to a disorder of the small intestines, on account of the foetid odour of the evacuations.

DYSOPIA. Impaired sight (which see) and *Eye*.

DYSOREXIA. Depraved appetite (which see).

DYSPEPSIA. Indigestion (which see).

DYSPERMATISMUS. Slow or impeded emission of *Semen* (which see), and *Spermatorrhœa*.

DYSPHAGIA. Difficulty of Swallowing (which see).

DYSPHONIA. Difficulty of Speaking (which see).

DYSPHORIA. Inquietude; a state of anxiety, or nervousness, in which it is impossible to sit still. See *Fidget*.

DYSPNŒA. Difficulty of Breathing (which see).

DYSTOCHIA. Difficult Parturition (which see).

DYSURIA. Suppression of, or difficulty in discharging the *Urine* (which see).

Total suppression is called *Ischura*, partial suppression *Dysuria*, and the aggravated form, in which the urine comes only drop by drop, and with great pain, is termed *Stranguary*; when there is much heat or pain it is *Ardor Urinæ*.

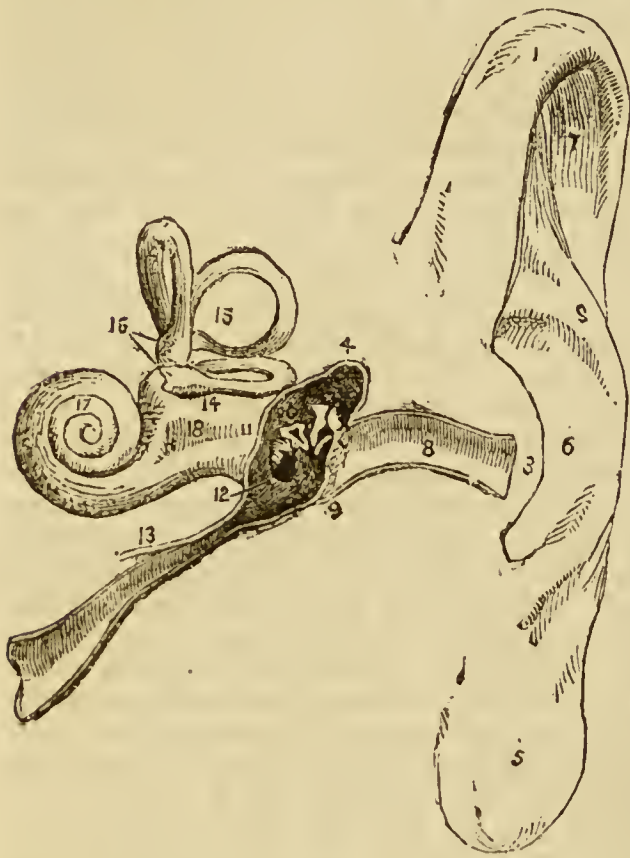
EAR. (Latin, *auris*.) With the general outward shape of the organ of hearing all of our readers are of course familiar, but few are aware what a complicated structure is within—through what winding passages and avenues, carefully guarded from external violence and injury, sounds have to make their way, before they reach the great centre of nervous susceptibility, the brain. Dr. Wilson, in his admirable little work, *The Five Gateways of Knowledge*, makes this inferior to the eye only in point of importance; he says, "What, in ordinary language, we call the ear, is only the outer porch or entrance vestibule of a curious series of intricate winding passages, which, like the lobbies of a great building, lead from the outer air into the inner chambers. Certain of these passages are full of air; others are full of liquid; and thin membranes are stretched like parchment curtains across the corridors at different places, and can be thrown into vibration, or made to tremble, as the head of a drum, or the surface of a tambourine does when

struck by a stick or the fingers. Between two of these parchment-like curtains, a chain of very small bones extends, which serves to tighten or relax these membranes, and to communicate vibrations to them. In the innermost place of all, rows of fine threads, called nerves, stretch, like the strings of a piano from the last point to which the tremblings or thrillings reach, and pass inwards to the brain. If these threads or nerves are destroyed, the power of hearing as infallibly departs, as the power to give out sound is lost by a piano or violin whose strings are broken. The eye is a single chamber open to the light, and we can see into it, and observe what happens there. But the ear is many-chambered, and its winding tunnels, traversing the rock-like bones of the skull, are narrow, and hidden from us, as the dungeons of a castle are; like which also they are totally dark. Thus much, however, we know, that it is in the innermost recesses of these unilluminated ivory vaults, that the mind is made conscious of sound. Into these gloomy cells, as into the bright chamber of the eye, the soul is ever passing and asking for news of the world without; and ever and anon, as of old in hidden subterranean caverns where men listened in silence and darkness to the utterance of oracles, reverberations echo along the resounding walls, and responses come to the waiting spirit, whilst the world lifts up its voice and speaks to the soul. The sound is that of a hushed voice, a low but clear whisper; for as it is but a dim shadow of the outer world we see, so it is but a faint echo of the outer world we hear."

Such, then, is the ear, poetically described; let us now attempt to give our readers some idea of its construction, by a more simple, if far less eloquent description. Anatomists make a three-fold division of the parts of this organ, viz., the *external*, the *middle*, and the *internal* portions, and this convenient arrangement it will be best for us to follow. The External Ear is that which is generally called "the ear," being the outward and visible manifestation of that organ; it is figured in the diagram in the fainter lines, and is distinguished by anatomists by the term *Pinna*; its extended hollow form evidently fits it admirably for its intended purpose of collecting the body of sound which is conveyed through the air-passage situated near the centre, of which we shall presently speak. This *pinna* is divided, for anatomical purposes, into the *helix* (1), which forms the external folded margin; *anti-helix* (2), the elevation parallel

with and fronting it; the *tragus* (3), that is the pointed process projecting like a valve over the opening of the ear from the face; the *anti-tragus* (4), a tubercle opposite to the last; the *lobulus* (5), being the lower dependent lobe or fleshy portion of the pinna; *concha* or cavity (6); *fossa innom*

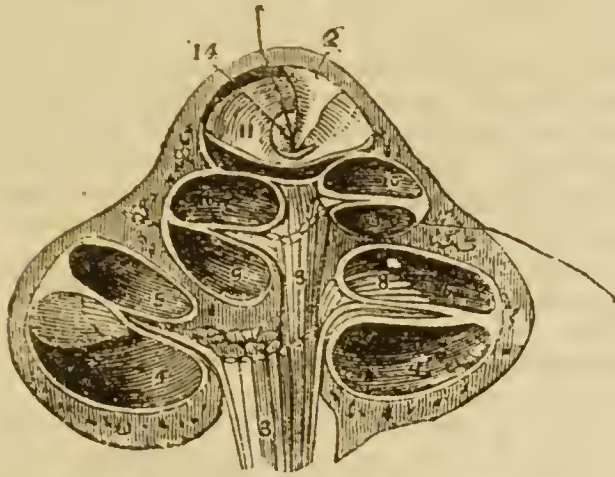
admit of slight motion, and are collectively termed *ossicula auditus*, the little auditory



inata, or *scaphoidea* (7), is the name given to the depressed space between the *helix* and *anti-helix*, at the upper extremity of the latter of which is another depression, termed the *fossa triangularis*, or *ovalis*: all the ridges and channels of the outer ear converge into the *concha*, or central hollow which opens directly into the *meatus* (8), an oval tube which conveys the vibrations to the *tympanum* (t) or middle ear, an irregular or bony cavity compressed from without inwards, having for its base the petrous bone; it is bounded externally by the *membrana tympani*, or drum of the ear (9), and the *meatus* (8); internally by the above-named bone; behind by the *mastoid cells* (not seen in the diagram); and throughout the rest of its circumference by the thin bony layer which connects the petrous (stony) with the squamous (scaly) portions of the temporal bones; *malleus* (hammer), *incus* (anvil), and *stapis* (stirrup), are three little bones (10), crossing the area of the tympanum, these are of very singular shapes, as will be seen by this cut, in which they are greatly magnified; they are articulated or joined together, so as to

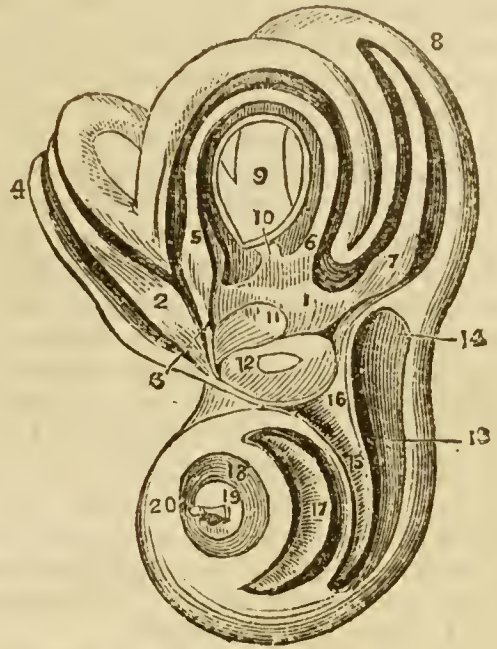
bones; the foot of the last of these named stapis, from its resemblance to a stirrup, blocks up the entrance to what is termed the *fenestra ovalis* of the inner wall of the tympanum, behind which is the *promontory* (11), which divides the above from the *fenestra rotunda*, an opening above the ossicula leading into the mastoid cells, which are numerous, and serve to prolong the vibrations of sound transmitted by the tympanous membrane; the *Eustachian tube* (13), is a canal about an inch and three-quarters in length, extending obliquely from the under surface of the tympani to the throat; the *vestibule* (14) serves to connect the middle with the internal ear, to the latter of which it may be considered as a sort of anti-chamber. This Internal Ear is called the *Labyrinth*, on account of the complexity of its channels of communication; connected with it are three bony passages, or semicircular canals (15), which are horizontal, perpendicular, and oblique as to position, and which, dilating at one extremity, form what we called *ampullae* (16), below which is the *cochlea* (17), which forms the anterior portion of the labyrinth; (18) marks a depression between the two tubuli, which communicate with the tympanum and vestibules, one of which is called the *scala tympani*, and the other *scala vestibuli*. If our readers will glance again at that part of the diagram marked 17, they will see that the shape of it is very curious, being spiral, or wound upon a centre like a coiled watch spring, or the convolutions of a snail shell, which is the signification of its Latin name *cochlea*, the two *scala* (thin bony plates or scales) wind through, and divide it into two hollow channels, one terminating by means of an oval in the hinder part of the vestibule, and the other, after becoming somewhat expanded, opening into the tympanum; the following cut exhibits a section of the Cochlea divided parallel with its axis through the centre of the bony

pillar on which the convolutions turn, and which is called the *modiolus* (1), this terminates in a cavity called the *infundibulum* (2),



the position of the *cochlear nerve*, which sends its filaments through the *modiolus*, is marked by the figures 3 3; the two hollows (4 4) are those divided by the *scala tympani* in the first wind of the cochlea, while 9 9 are those of the second wind or turn; 5 5 and 10 10 are those of the *scala vestibuli* first and second turns; between 4 and 5 are the *laminæ spiralis*, three plates, forming what is called a *septum*, literally a hedge, a division, and between the layers of this and the other *laminæ* pass filaments of the cochlear nerve, distributing themselves on the investing membrane, which is thus rendered acutely sensible of the slightest vibration of sound, this nerve forms loops on the *laminæ* as marked at fig 8; at 11 we see the hollow formed by the remaining half turn of the *scala vestibuli*, the dome over which is called the *cupola* for an obvious reason; the line leading from this hollow passes into that formed by the half turn of the *scala tympani*, and the bone which forms its floor curves, spirally round to form a continuation of the *infundibulum* (2); the line attached to 14 marks the *helicotrema*, or the opening by which the two *scala*, which throughout their course are perfectly distinct, communicate above. The following cut exhibits the Labyrinth of the left ear, with its cavities and membranous lining, which although smaller in size, is a perfect counterpart of its bony covering. Fig. 1 is the cavity of the vestibule; 2, the *ampulla* of the perpendicular semicircular canal, which receives a fasciculus, or little bundle from the upper branch of the vestibular nerve, marked 3; 4 indicates the perpendicular canal, with its membranous enclosure; 5 is the *ampulla* of the horizontal semicircular canal, 6 is the termination of the mem-

branous lining of the last-named; 7, the *ampulla* of the oblique semicircular canals



8, the same canal with its inner membrane; 9 is the common canal formed by the junction of the perpendicular with the oblique and semicircular; 10, the membranous interior terminating in the *sacculus communis* (common sac or bag); 11 is what is called the *otocinite* of this sac; and 12 is the *sacculus proprius*, situated at the anterior ventricle; 13 is the first turn of the cochlea, the figure pointing to the *scala tympani*, of which 14 marks the extremity passing into *fenestra rotunda*; 15 is the *laminæ spiralis*, and 16 the opening of the *scala vestibuli*, in which the figure is situated, into the *scala vestibuli*; 17 is the second turn of the cochlea, and 18 its remaining half turn; at 19 we have again the *laminæ spiralis*, terminating in its falciform, or scythe-like extremity, the dark space within which is the *helicotrema*; at 20 we come to the cavity called the *infundibulum*. A comparison of this diagram with the section of the cochlea previously given, will enable our readers to obtain a tolerably clear notion of the internal structure of the Ear. The membranous lining of the labyrinth is retained in its position by numerous filaments, or threads of nerve, which pass to it through the openings of the inner wall of the vestibule, and the space between the bone and the membrane, is filled with a watery fluid called *aqua labyrinthi*; the auditory nerve is spread over the surface, or rather between the folds, of the membrane, and the vibrations communicated by the stapes, or stirrup-bone (already described) and received by the *fenestra ovalis*, and passed into the *fenestra rotunda*, whose sole

use appears to be to convey the sound throughout the labyrinth.

There are numerous muscles by which the various movements of the ear, both internally, and externally are affected; and nerves and blood-vessels, which it would be useless to particularise here: we may just mention the beautiful arrangement by which the tympanous membrane, or drum of the ear, is always kept in a proper state of tension; this is effected by two muscles, called respectively the *tensor tympani* and *laxator tympani*, which have the power of elating or depressing the bone called *malleus* or hammer, the handle of which is attached to the drum throughout its whole length, while its point extends to near the middle: through the Eustachian tube, air from without passes into the cavity, but as this tube opens at the back of the throat, it is out of the direct current of respiration, and so does not admit of cold air, which would be likely to cause inflammation.

EAR-ACHE may proceed from abscess in one or more of the passages, or it may be altogether neuralgic. In children it is not uncommon during the period of dentition, and is especially severe in cutting the permanent teeth; grown persons sometimes suffer from it when producing their wisdom teeth; it is often brought on by exposure to cold or draughts; there is not often much constitutional derangement, although the pain is sometimes excruciating, unless it is long continued.

Treatment.—In children, during dentition, lancing the swollen gums will often afford relief, especially if an aperient be given, such as Rhubarb and Magnesia combined with a little Ginger, as in the Gregory's Powder; elder children may have a little Laudanum dropped into the ear, and take Compound Senna Mixture, repeated until the bowels are freely opened; should these remedies not prove effectual, a fomentation of Camomiles and Poppies should be applied, and a warm poultice afterwards; the heat of a roasted onion applied warm to the external orifice will sometimes afford relief. If the case is very obstinate, two or three leeches behind the ear, followed by a blister, may be tried, with an anodyne saline aperient something like this:—Acetate of Morphine $\frac{1}{2}$ a grain, Solution of Acetate of Ammonia 3 ounces, Sulphate of Magnesia 1 ounce, Water or Camphor Mixture 5 ounces; mix and take two table spoonsful every four hours. When ear-ache is caused by an abscess, and is attended with much swelling and severe pain, hot fomentations and poultices will be the treatment, syring-

ing the external passage with warm water, and, after the abscess has discharged, with a solution of Sulphate of Zinc, in the proportion of 8 grains to the ounce of plain, or Rose water, attention being paid to the bowels. With some persons any derangement of the general health will cause the formation of these abscesses, and in such cases the treatment must be rather general than local. Ear-ache, no doubt, often proceeds from derangement of the digestive organs, and may be relieved by active purgatives and emetics. When it is strictly neuralgic, Quinine, or some preparation of Iron, will be the most appropriate remedy, with stimulating liniments rubbed in behind and about the ear. See *Neuralgia*.

Noises in the Ear like the distant sound of bells, roaring of the sea, hissing, and singing, &c., are often indicative of a determination of blood to the head; with some, mere derangement of the digestive organs will cause these noises; when accompanied by a certain degree of deafness, they are generally occasioned by an accumulation of wax in the external passage, or a partial stoppage of the Eustachian tube by cold. When the noises become chronic, or long continued, bathing the head regularly every morning with cold water will sometimes remove them; if cold be the cause, or disordered stomach, they will pass away with the temporary ailments which occasioned them; if too great a fulness of the veins of the head, cupping, leeching, or abstraction of blood by means of the lancet, with a depletive course of treatment must be adopted.

Polypus of the Ear is by no means an uncommon form of the fungoid growth, which sometimes occurs in several of the internal tissues. It is of a jelly-like consistence, and a whitish yellow colour, and is attached to the membranous lining of the ear; there are also granulations of fungus which sometimes shoot up from the membrane, and are distinguished by their reddish hue from polypi; these may generally be removed by being held firmly with a pair of forceps and then gently twisted and pulled at the same time; this should only be done by a properly qualified person, as much mischief may result from the unskilful application of the forceps to so delicate a part; sometimes when the polypus is in the external passage, and not far up, it may be destroyed by astringent applications, such as the Muriated Tincture of Steel, or Burnt Alum, applied with a camel hair brush.

Wax in the Ear.—When this substance becomes too hard, or accumulates too much,

There will be a sense of contraction, with cracking or hissing noises, and generally deafness to a considerable extent; in this case the ear should be syringed with warm soap suds, the instrument used being a proper one for the purpose, holding about 4 ounces, and having but a small tube or pipe which does not fill the whole passage, but allows the escape of the back water, for catching which a hand-basin should be held close against the neck. As many as a dozen syringefuls may be injected at one time. A strong lotion should be put into the ear-passage over night and kept there by means of cotton wool or wadding; Almond Oil and Laudanum, in the proportion of 2 ounces of the former to 1 of the latter, is a good application in this case, as in many other kinds of Ear disease; it will also frequently stop Ear-ache resulting from cold and other causes.

EAR DISEASES are not so easily determined as those of many other organs on account of their greater concealment. Delicate and scrofulous children are especially liable to a yellow discharge, which suddenly comes on, and is at first often stained with blood, and accompanied by feverishness and great pain in the parts; there is generally redness and swelling of the passages of the meatus, and inflammation of the surrounding skin. This may arise from an inflamed state of the membrane which lines the passages, or from an abscess formed beneath it, or between the cells of the bones of the mastoid process. The discharge may be caused by some foreign substance thrust into the ear, such as a bead, pea, or piece of slate pencil; in this case great care must be exercised in attempting to remove the foreign body. Very commonly this fills the whole cavity, so that it is difficult to insert any instrument between, and the danger is that it may be pushed so far in, as to press upon the tympanum, causing inflammation and acute pain; sometimes the efforts to effect the removal result in the displacement, and bringing away some of the small bones; while the object whose removal is attempted is probably pushed into a position from whence only an operation will extract it. A pair of fine forceps in the hands of a skilful surgeon will probably effect the desired object, or it may be done by a careful mother or nurse by means of an ear-pick; but it is best for such to have recourse to a syringe and warm water, taking care to throw the water in gently, and leave plenty of room for its return through the orifice of the ear. If these efforts are unsuccessful, it is best to let the foreign body remain for a

day or two, it will most likely cause an enlargement of the orifice, and become coated with wax, which will render it less irritating to the membrane, and also facilitate its removal; from time to time the syringing should be continued, and this will no doubt eventually effect the removal. A piece of slate pencil is one of the most frequent, as well as dangerous substances which can be introduced into the ear; as on account of its angular form it is very difficult of extraction, and likely to cause irritation; a pin or a needle is also bad, the latter especially, as it is likely to make its way into the intricate parts, and cause serious temporary, if not permanent, mischief; either of these, however, if their insertion be known of in time, can generally be taken out by means of forceps.

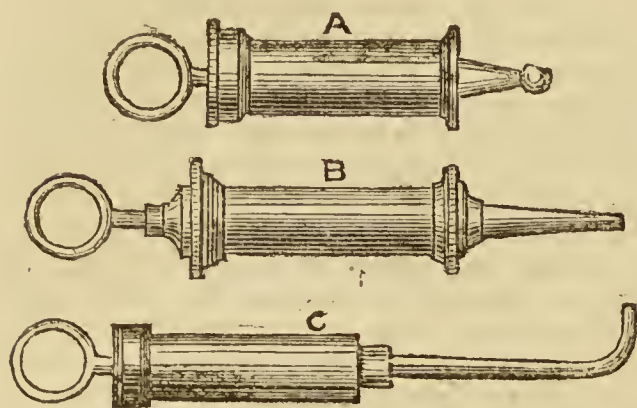
For the purulent discharge from the ear, which is induced by this or any other cause, a lotion made with 2 drachms of Solution of Chlorinated Soda to 6 ounces of Rose, or Elder-flower water, should be injected, but not with any force; the best method is to let it flow into the ear, held so as to receive it fairly, from a small sponge saturated with the lotion.

As children sometimes fancy things have got into the ear when they really have not, it is best to institute an examination before attempting their removal; this may be done by drawing the upper lobe of the ear upwards and backwards, which will have the effect of straightening the curved passage so that the eye can discern the drum at the bottom, unless there is an interposing object.

Counter-irritation will sometimes have a good effect on purulent discharges from scrofula or other causes; a small blister behind the ear is the best application, but it should not be kept open for any length of time, or it will weaken the system too much. When the discharge is the result of active inflammation, and is attended by febrile symptoms, a spare diet and aperients must be the treatment; but weakly scrofulous systems require a generous diet and tonic medicines. See *Scrofula*.

EAR SYRINGE. This instrument may be of brass, pewter, or some other metal; it is generally made to hold 1 or 2 ounces, the latter is the best size to purchase; those marked in the following diagram are the most approved shapes:—A is called Curtis's, and B Abernethy's ear syringe, and C is a self-using instrument, care must be taken not to thrust the point in too far: the globular termination of the first of the above effectually prevents this, and it is therefore

perhaps the safest for domestic use; the liquid should be thrown in quite gently, and if it causes great pain should be stopped



for a time; a towel or basin must be held close under the ear to receive the return flow.

EAR TRUMPETS. Vary greatly in shape, and the material of which they are composed; we shall speak more fully of these when we treat of *Deafness* (which see).

EARLY RISING. As a practice generally conducive to health it behoves us to make this the subject of a short article, the more especially as it is not always the *elixir vitæ* which the proverbialists assume it to be. There are persons so constituted as that to rise and sally forth into the green fields, to climb the grassy hills, and to inhale the pure fresh morning air, before the sun has exerted much power upon the earth, is positively hurtful, and to whom a morning walk, or any active exertion before breakfast, is a sure precursor of a day of listlessness and langour, if it be not head-ache, or serious indisposition. True it is that, as a general rule, the early riser will be stronger and more long-lived than one who lets the earth get well aired before he ventures abroad, and thus those in the enjoyment of vigorous health and a robust constitution will be most likely to preserve those blessings unimpaired by leaving their bed at an early hour, and taking a walk before breakfast; but those who are suffering from any organic diseases, especially such as affect the lungs, or who from any cause have debilitated constitutions, will find but little benefit from the practice; on the contrary, it often accelerates the disease, and yet more weakens the system by such fatigue and exposure to the chill morning air. Do we not recommend early rising? Most assuredly we do to the vigorous and healthy, as well as to those who are not so, if they feel that they can bear it; they must be guided by their feelings: sometimes the "caller air," as our Scottish friends call it, acts as a restorative; very

frequently it does so, and most invalids will do well to try it—only let it be remembered that early risers should obey the proverb and go "early to bed," so as not to curtail the hours required for natural rest; if they do this, however much benefit they may for a time appear to receive from their walks, they will eventually find that with them early rising has *not* conduced to permanent *Health* and *Longevity* (which see).

EARTH. This is the general term for the minerals which compose the crust of the globe: its claim to admission here rests upon the fact that a number of earths are employed medicinally; these are properly metallic oxides, and they partake to a great extent of the nature of the metals which form their bases; the alkaline earths are those with which we are principally concerned, these are—*Baryta*, from Barium; *Lime*, from Calcium; *Magnesia*, from Magnesium; and *Strontia*, from Strontium: to these we may add *Alumina*, or Clay, from Aluminum, sometimes called Argillaceous Earth; *Glucina*, from Glucinum; *Silica*, from Silicium, which constitutes nearly the whole of flint; *Thorina*, from Thorium; *Zirconia*, from Zirconium, which forms the bulk of the gem called Hyacinth. An account of the nature and properties of the first four will be found under their several heads; with the rest and some other earths, which are commercially valuable, we have no concern here.

EARTH BATHS. Are sometimes used on the Continent as remedies for diseases, but they are very disagreeable ones, and do not seem to possess any peculiar advantages which should entitle them to adoption in this country.

EARWIG. It is a popular fallacy that this well-known member of the *Coleoptera*, or beetle tribe, has a fondness for getting into the human ear, and that it sometimes penetrates to the brain and causes madness; if it ever does enter the ear at all, which is questionable, its size would prevent its going far even into the external passage, and farther than this the *membrane tympanus*, or drum of the ear, would effectually bar its progress, as it would that of any other living creature, however small. Newman in his "Grammar of Entomology" says—"It seems highly probable that the original name of this insect was *Ear-wing*, and not *Ear-wig*, which is entirely without meaning;" and we may add, that this name might probably be derived from the shape of the wings, which, when expanded, are much like that of the lobes of the ear.

EAU-DE-COLOGNE (Cologne Water). This

is a preparation of Essential Oils, or the herbs which yield them, containing—like Lavender and other waters (so called) used chiefly as perfumes—a large amount of spirits. It is named after the place where it originated, and from whence is still sent out more than a million of bottles annually, although perhaps not a tenth-part of the water which is sold under the name of Eau-de-Cologne really comes from that city. In the French Pharmacopœia is the following form of preparation:—Take Oils of Bergamot, Citron, and Lemon, of each 3 ounces; Oils of Rosemary, Neroli, and Lavender, each $1\frac{1}{2}$ ounces; Oil of Cinnamon, 6 drachms; Rectified Spirits, 24 pints; Compound Spirit of Balm, 3 pints; Spirit of Rosemary, 2 pints; mix, and after standing a week, distil 24 pints. The following is more simple and easily prepared:—Oils of Bergamot, Lemon, Neroli, Orange Peel, and Rosemary—of each 12 drops; Cardamum Seeds, 1 drachm; Rectified Spirit, 1 pint; mix and put by for use; it improves by keeping. The grateful scent of Eau-de-Cologne, and the delicious coolness produced when it is rubbed over the forehead, or other heated part, and blown upon, have long rendered it a favourite with sick persons; it is also taken internally as a stimulus in nervous debility, and the faintness which frequently overcomes weakly persons, especially in hot weather: from 20 to 30 drops in a little water, or Camphor mixture, may be taken as often as required.

EAU-DE-JAVELLE (French, *eau* water). This is made by passing Chlorine Gas into a solution of 1 pound of Carbonate of Potash in a gallon of water; or, by dissolving 8 ounces of dry Chloride of Lime in 6 pints of water; 16 ounces of Carbonate of Potash in a quart of water, and mixing the two liquids; it is chiefly used as a bleaching liquid, or a disinfectant.

EAU-DE-LUCE. This is the *Spiritus Ammoniac Succinatus* of the older Pharmacopœias, being a compound of the Essential Oil of Amber with Volatile Alkali; it was formerly taken as an antispasmodic, and applied externally as a rubefacient. A more agreeable form of preparation is as follows:—Gum Mastic, 2 drachms; dissolve in 9 drachms of Rectified Spirits of Wine, and add 30 drops of Oil of Lavender, 10 of Bergamot, and a pint of strong Water of Ammonia.

EAU-DE-RABEL. The composition of this is 1 pint of Sulphuric Acid to 3 of Rectified Spirits of Wine; it is used in France, much diluted, in gonorrhœa, leucorrhœa, &c., but has not obtained favour in this country.

EAU-DE-VIE (in Latin *Aqua Vitæ*, meaning Water of Life). A name sometimes applied to Brandy, showing the high estimation in which it is held as a remedial agent.

EBULLITION (Latin *ebullio*, to bubble up). The boiling point, being that at which vapour is produced. See *Evaporation*, *Steam*.

ECCHYMOSIS (Greek *ekchyo*, to pour out). That condition of the skin in which the blood is extravasated, or spread from its proper channel over a considerable surface, and appears in livid spots or blotches; this is the case in bruises and in Typhus and some other fevers; it is distinguished by surgeons according to its appearance, as—1st, *Petechiæ*. sigmata or specks; 2nd, *Vibices*, or *Ecchymomata*, patches; and 3rd, Sanguinous discharges. A very common example of Ecchymosis occurs in bruised surfaces, and what are called blood-shot eyes; it is often brought on by violent coughing, or straining of any kind, which causes the vessels to give way, and allows the blood to escape into the surrounding tissues. There is little to be done medically; bathing with cold water may be of some service; but, without any such application, in time the absorbents will take up the extravasated blood, and restore the part to its natural appearance.

Ecchymoma Lymphatica is a term sometimes applied to puerperal tumid leg, or *Phlegmatic Dolens*.

ECCRITICA (Greek *ekkrino*, to strain off). Diseases of the excrement functions.

ECCYESIS (Greek *ekkyco*, to be pregnant). Imperfect foetation in some organ without the uterus, as in one of the ovaria, the Fallopian tube, or the cavity of the abdomen. See *Pregnancy*.

ECLAMPSIA (Greek *eklampto*, to shine forth). Convulsive motions, especially of the mouth, eyelids, and fingers, so rapid that it is often difficult to follow them.

ECPHYNIA (Greek *ekphyo*, to spring out). A cutaneous excrescence. See *Caruncle*, *Clavus*, *Verruca*.

ECPHLYSIS (Greek *exphlyzo*, to bubble up or out). Vesicular eruption, confined in its origin to the surface. The several species of Pomphlox, Herpes, Rhyphia, and Eczema are comprehended under this term (which compare with *Emphlysis*).

ECPHRONIA (Greek *ekphron*, out of one's mind). A kind of insanity. We generally understand, by this term, a species of melancholy *Madness* (which see).

ECPYESIS (Greek *ekpyco*, to suppurate). Applied to the humid kinds of eruptions, such as *Ecthyma*, *Impetigo*, *Porriigo*, and *Scabies* (which see); and for comparison, *Emphyesis*.

ECSTACIS (Greek *existamai*, to be out of one's senses). Ecstasy, or *Trance*, (which see).

ECTHYMA (Greek *ekthyo*, to break out). A pustular disease of the skin: it is distinguished as—1st, *E. vulgare*, common; *E. infantile*, infantile; 3rd, *E. luridum*, dark coloured; and 4th, *E. cachecticum*, cachectic. See *Skin Diseases*.

ECTOPLÆ (Greek *ek*, out, and *topos*, a place). A term applied to protrusions of any part, such as occur in hernia, &c.

ECTROPIUM (Greek *ektrepo*, to evert, or turn outwards). Eversion of the eyelids. Compare *Eutropium*, and see *Eye*.

ECZEMA (Greek *ekzeo*, to boil out). A disease of the skin, which is characterised by the appearance of minute vesicles, which form into thin flakes or crusts; it is distinguished as—1st, *E. solare*, sun heat, or heat spots; 2nd, *E. impetiginodes*, impetigenous humid, or running; and 3rd, *E. rubrum*, or red Eczema was formerly called Erythema Mercuriale, or Mercurial disease, because thought to be produced only by taking Mercury; but it is now known to proceed sometimes from other causes. See *Skin Diseases*.

EDUCATION. There is an education of the body as well as of the mind, and it is with the former that, in this work, we have chiefly to do; although, on account of the influence which the mental exercises over the physical, and *vice versa*, the latter must to a certain extent come under our consideration.

Educo, in Latin, means to lead, to conduct, or bring out, or forth, and hence we have this word Education, leading our thoughts to a social, political, and religious question, of deep, nay, awful importance, into all the bearings of which we need not enter. The physical education of children commences at a very early age, as soon, indeed, as they are able to support or do anything for themselves; even then their motions and actions require guidance and direction, and this must be continued with increasing vigilance and care up to a period when the bodily powers are fully matured: the child must be taught to walk aright, as well as to speak correctly; and to exercise the bodily functions, as well as the mental faculties; or it is likely there may be an imperfect development in both cases, or an obliquity of growth, which will seriously affect its future state and destiny. So much has been written and spoken of late upon the laws of health, and physical, as well as mental education, that most of our readers, we apprehend, will be aware at least of the

general principles which should guide them in the management of the young. The injunction to "train up a child in the way he should go," may be understood in a double sense, and every conscientious nurse and careful mother will make it her chief study to conduct this training, and discharge the duty imposed upon her, in such a manner as may be most likely to make healthful and vigorous men and women of the children under her charge, and conduce to her own peace of mind. Frequently yet, although not so much as formerly, do we see stunted, deformed, or feeble creatures, who owe their defective stature, their weakness of body, or their spinal or other deformities, to an improper Physical Education, an important part of which consists in the formation of regular habits of eating, drinking, and answering the calls of nature; in personal cleanliness, in proper and moderate exercise, in a due command of passions and inclinations, and strict obedience to the wishes and directions of parents and teachers; for although these latter claims may at first sight seem to have regard rather to moral than physical training, yet, certain it is, that an unruly, headstrong, disobedient child, will seldom make a vigorous, healthful, and long-lived man. If unrestrained by the voice of affection or of authority, he will generally in youth run into wild excesses which will sap the foundations of health, if they be not already undermined by injudicious indulgences in the earlier stages of existence.

We have spoken of exercise as a part of Physical Education: this, taken regularly, and sufficiently, is absolutely necessary for a proper development of the muscular and other powers of the body. Much of the time in youth must necessarily be given to study, but there must be play as well as work, walking as well as reading and writing, and talking and laughing as well as puzzling the brains, and crying over sums which will not prove, and lessons which will not remain in the memory. Calisthenics are quite as necessary as calligraphy, and the use of the limbs as that of the globes; therefore, our boys and girls should not be confined too closely to the nursery and schoolroom, the latter of which they should never enter before the age of six, or, if weakly, before that of seven or eight. Without exercise the muscles of the body, any more than the faculties of the mind, will never be fully developed; nor will the food of which children do, as they ought to, take a large quantity, be properly digested and assimilated, so as to afford the means of building up and filling out the

bony framework of the body, and carrying on the various functional operations which are essential to health. Then, again, as no exercise can be beneficial, if the mind is not interested in it, we see how important it is that the mind should be free to take pleasure in the walks and pastimes of youth, and whereas God has connected our mental manipulations with a physical organ, the brain, which is likely to share in the strength or weakness of the body, and to be affected by its ailments: we see, also, how intimately connected are Mental and Physical Education.

EDULCORATION (Latin *dulcis*, sweet). The sweetening of any medicinal preparation.

EEL. This fish, esteemed by many a great luxury, is by no means to be recommended, it being very oily, and therefore indigestible. The oil procured from it by roasting is sometimes employed with advantage for rubbing into stiff joints.

EFFERVESCENCE (Latin *effervesco*, to grow hot). The bubbling or commotion caused in fluids by the rapid escape of vapour or gas: thus boiling is effervescence; but, medically, the term is usually applied to the extrication of carbonic acid gas only; this gas is contained naturally in many mineral waters, and it is produced artificially by an acid and an alkali. In fermented liquids it is generated in the process of fermentation, and they are brisk or vapid, lively or dull, in proportion to the quantity which they contain.

EFFERVESCING DRAUGHTS. Are extremely useful in many kinds of sickness: they are particularly so in fevers, when the thirst is great and when there is sore throat and a furred tongue; they appear to cool and refresh the patient, and to exert a sedative effect as well as to remove the thick mucus and other incrustations of the tongue and throat, as they probably do, also, those of the stomach. For the mode of preparing these draughts (see *Beverages*). The patient after taking one should always remain in an upright position for a minute or two, to break off the wind, which with the gas will be pretty sure to be expelled from the stomach. See *Eructation*.

EFFLUVIA (Latin *effluo*, to flow out). Vapours, or gaseous emanations or exhalations from bodies; the term is generally applied to those which are prejudicial to health and are offensive to the sense of Smell (which see), also *Contagion*, *Infection*, *Miasma*.

EFFUSION (Latin *effundo*, to pour out). The escape of a fluid out of its natural vessel or viscus, into the surrounding cavities or tissues; or the secretion of an unna-

tural quantity of fluid, as of lymph or serum, on any surface. Effusions may take place in the head, the chest, the abdomen, the bronchial passages, the joints, or any part of the cellular tissue; they are generally caused by inflammatory action: when occurring in the brain they cause *Apoplexy*, or *Hydrocephalus* (which see), also *Anasarca*, *Edema*, *Dropsy*, &c.

EGG (Latin *ovum*). That of the domestic fowl is chiefly used for medical and nutritive purposes, for which it is highly valuable, containing a larger amount of nutrition than perhaps any substance of equal bulk, and being more easy of digestion and assimilation: the white is composed of albumen, with a small proportion of earthy salts, and the yelk, or yolk, has in addition oily matter and sulphur; beaten up with milk, or wine, or some other suitable fluid, it may be taken with great advantage by weak and sickly persons, or boiled just sufficient to set the albumen, but not to make it hard, in which state it is indigestible. If put into boiling water, about 2½ minutes will suffice to cook an ordinary sized egg; if into cold, it will be done almost as soon as the water reaches the boiling point; a little salt should be taken with it, and pepper, if agreeable. Eggs seldom agree with persons whose digestive organs are very weak, or who have a tendency to an over secretion of bile. Under the head of *Beverages* will be found receipts for preparing *Egg-flip* and *Egged Wine*, which are both good cordial restoratives. Custards, and puddings of which eggs form an important ingredient, are generally good for invalids, if not made too rich; we must refer our readers to their cookery books for modes of preparation.

EJACULATORII (Latin *ejaculo*, to cast out). A pair of muscles surrounding the whole of the bulb of the *urethra* (which see).

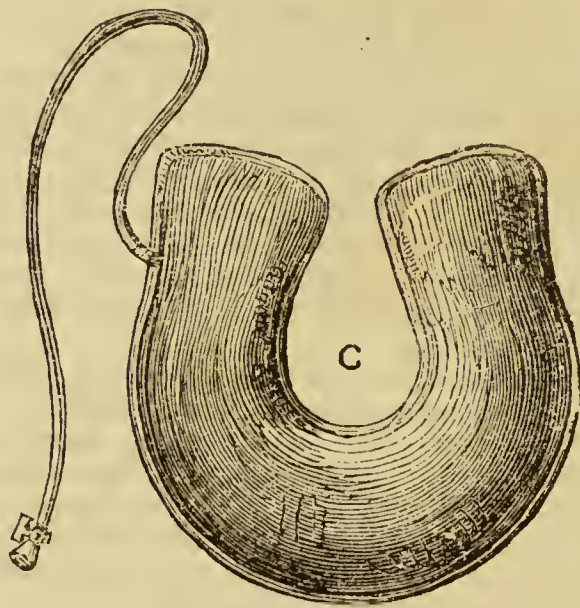
ELÆOSACCHARA (Greek *elaion*, oil, and Latin *saccharum*, sugar). An old term for preparations made by titrating ½ an ounce of Essential Oil, with three times the quantity of powdered White Sugar, and sometimes adding 1 ounce of Magnesia; it is a form of preparation now seldom used. See *Linctus*.

ELAIN (Greek *elaion*, oil). The more fluid part of one of the proximate principles of fat, and that which with *Stearine* constitutes the fixed oils. From the same root comes *Elaodic Acid*, an acid obtained from Castor Oil, and *Elais Guinensis*, the Guinea Palm, which yields the Palm Oil, and, according to some, the best kind of Palm Wine.

ELASTIC GUM. See *Caoutchouc*, *Indian Rubber*.

ELASTICITY. This is the property or power which certain bodies possess of returning, when stretched or bent, to their original form and position, as soon as released from the constraint put upon them; steel is elastic, but only in a particular way, because it will only bend, not stretch; but caoutchouc, or Indian rubber, especially when vulcanized, exhibits this property most perfectly, and is therefore applicable to a great variety of purposes, among which, those relating to the treatment of diseases are not the least important; thus we have elastic bandages, belts, stockings, and supports of various kinds, which are more fully described under the heads of the diseases or injuries to the relief of which they are applied. Air and water beds and cushions are also made of this material, and these, by relieving the amount of pressure on wounds, sores, &c., and also by affording counter pressure on the surrounding parts, conduce greatly to the cure and comfort of sick persons. Some of these contrivances we have already described under the head of *Beds*, in which also are given the names of some of the principal inventors and vendors of these useful articles, to whom application can be made by such of our readers as may require them. The following cuts will exhibit the forms and construction of the elastic air cushions manufactured by

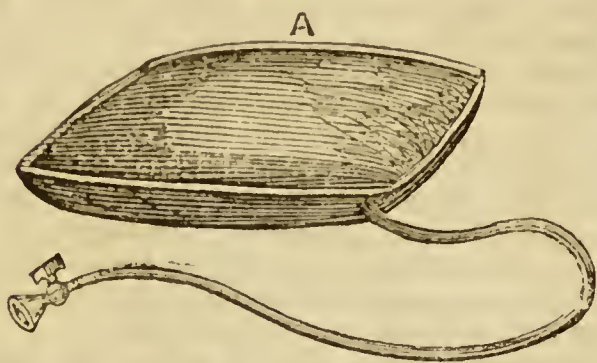
cushion for general purposes; B, a circular cushion for sitting on, which may be had with or without the hole in the centre; and



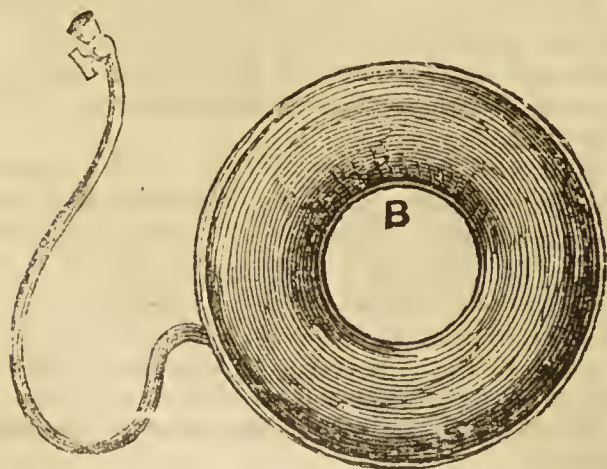
C is a horse-shoe shaped cushion, the use of which will be sufficiently obvious.

ELATERIUM (Greek *elazo*, to stimulate). This term was applied by Hippocrates to drastic purgatives generally, but its present signification is the active matter which subsides from the juice of the wild, or Squirting Cucumber, a plant of the natural order *Cucurbitaceæ*, whose scientific name is *Ecbalium Elaterium*, or *Momordica Elaterium*. The result of a carefully conducted series of experiments by Dr. Clutterbuck is, that the active principle of this plant resides not in any quantity in the plant, as the old medical writers supposed, but only in the juice round the seeds; and the quantity of this is so small, that only 6 grains could be got from forty Cucumbers. This *elatin*, as Dr. Paris has called it, is violently cathartic; it is sometimes prescribed in obstinate constipation, but most commonly in *Dropsy* (which see); it varies greatly in strength, and should be administered very cautiously, especially to weakly patients, as an over dose acts as an irritant poison. Of the Extract, from $\frac{1}{2}$ to 2 grains; of the Tincture, 60 minims; of the Elatin itself, 1-16th of a grain is a dose; the best form of administration is a pill made with aromatics and bitter extract, such as Gentian. The fresh fruit of the Elaterium is called *Elaterii Pepones*.

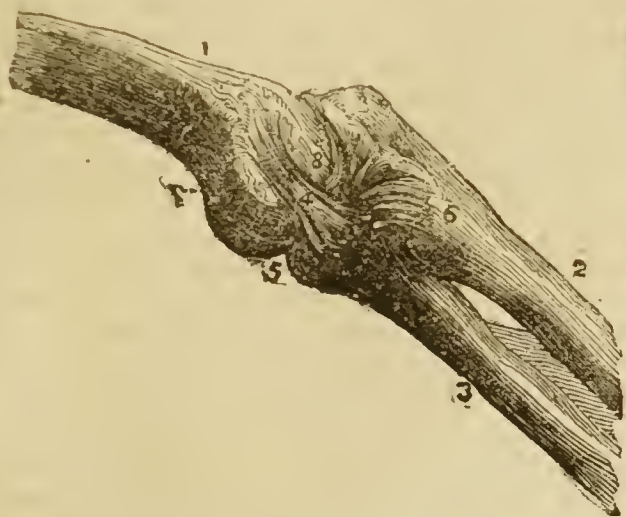
ELBOW-JOINT. We have already spoken of the complicated character of this joint, under the head of *dislocations*; we now furnish our readers with a cut, which will enable them to understand the matter more clearly. This presents an external view:—1 is the *humerus*, or upper bone of the arm,



Mr. Hooper, of Pall Mall, London. A is a



2 the *ulna*, and 3 the *radius*, these two being the lower bones, they are all held together by ligaments connected with both extremities of the bones, and with the shaft; 4



marks the insertion of the external lateral ligament, which passes beneath into the orbicular ligament 5, of which the hinder part (6) is spread out at its insertion into the ulna; 7 marks the situation of the anterior ligament, scarcely seen in this view; and 8 is the posterior ligament, thrown into folds by the extension of the joint; there are other ligaments not shown here, nor are the muscles by which the complicated movements of the joint are affected, these actions are the rotation of the radius (3) upon the ulna (2), that in a forward direction being termed *pronation*, in a backward *supination*; it is a ball and socket joint, and the movements are chiefly limited by the anterior and posterior ligaments, which in great muscular efforts are not unfrequently ruptured, hence *Dislocations* (which see). The actions of the Elbow-joint itself, being that of the humerus in its socket, formed by the coronoid process, may be likened to those of a pump handle up and down; the muscular effort which produces them causes flexion and extension of the ligaments, they are limited behind by the coronoid process, and in front by the olecranon, or head of the ulna.

ELDER (Latin *sambucus*). The bark, leaves, flowers, and berries of the common Elder (*Sambucus Nigra*) of the natural order *Caprifoliaceæ*, are all used medicinally; the first is said to have purgative properties, and has been given in dropsies; the second are boiled down with lard to make an ointment, which is a cool and soothing application for irritable sores; the third are also made into an ointment, which is cooling, healing, and gently stimulating; they are likewise distilled for Elder-flower water, which has an agreeable odour, and is a good menstruum for

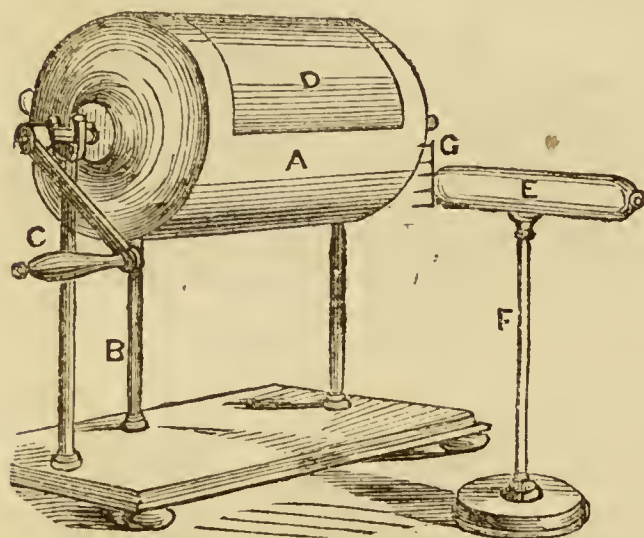
cooling lotions, cosmetics, &c.; the fourth are diaphoretic and laxative; of their expressed Juice from 2 drachms to $\frac{1}{2}$ an ounce may be given at the time. Of the rind of



the inner Bark, powdered, the dose is from 5 to 20 grains; and of the Decoction of the same, made by boiling one ounce of this bark in two pints of water, until it evaporates to 1 pint, the dose is from 2 to 4 ounces.

ELECTRICITY (Greek *elektron*, amber). So called because by rubbing this substance the existence was first discovered of that subtle fluid which appears to be diffused throughout all nature, either in a latent or active state, according to circumstances; we have here only to speak of it as an agent in the treatment of disease, in which of late years electric, galvanic, or magnetic action has been much employed. Before doing this, we may just explain the principle upon which the construction of all electrical machines, and galvanic batteries, are based: in

the first case, friction is the agent employed for exciting the latent fluid into activity, and how employed the following diagram will best explain; this is the common Elec-



trical Machine, A is the glass cylinder, the axis of which is supported on a frame, and which is pressed upon by a cushion stuffed with horse-hair, and covered by an amalgam of zinc and mercury spread over its surface; this cushion is attached by a conducting bar (B) of metal, generally iron, connected with the frame, and with it communicating with the table, or the ground on which the machine stands. To one extremity of the axis of the cylinder is attached a handle (C), by which it may be made to revolve rapidly, and by the friction of the cushion against the glass, electricity will be produced upon its surface, to guard which against the moisture of the air, the upper part of the cylinder should be covered with a piece of silk or glazed taffeta (D), falling over in the direction of the rotatory motion, so that it retains its place; E is a long narrow hollow metallic cylinder, supported by a glass rod (F), and having at the extremity a cross bar of metal, set with teeth (G), presented towards the larger cylinder, which, on being turned briskly round, communicates the electricity produced by the friction through the toothed bar to the smaller metal cylinder (E), which being isolated on the glass, non-conducting pillar, retains it until it is brought into contact with some conducting substance, which may be simply the finger of a person, or a metal chain, one end of which is attached to this conductor, and the other held in the hand. This is as simple and clear a description as we can well give of the machine for generating electricity; there are several modifications of it, and of late, glass plates have been used instead of the large cylinder,

but in all these the principle is the same. The galvanic batteries are somewhat different, and of these we shall speak under the head of *Galvanism* (which see).

The effect produced upon the system by Electricity is that of a nervous excitant and stimulant; it promotes a freer circulation of the fluids, particularly of the blood, increases animal heat, and all the secretions and excretions of the body. It has been found chiefly useful in deafness, paralysis, head and tooth-ache, indeed all neuralgic pains; to parts affected with cramp, gout, and rheumatism it has often been applied with success, and also to foul and indolent ulcers. In asphyxia from drowning it should always be employed, if the means to obtain the necessary apparatus can be had, although only as an adjunct to other efforts. Electricity should *not* be applied when there is active inflammatory disease; nor when there is a high degree of excitement in the organs of sense, and in those of voluntary motion; or when there is great relaxation and debility in those organs; nor when there is any prevailing local irritation, such as inflammatory tumours, skin eruptions, &c. The electric stimulus in such cases is likely to produce congestion, or a local accumulation of humours: the shocks given may be continuous, or a succession of smaller shocks, but they should always be regulated by the strength of the patient, and never be very violent, or they may cause serious mischief. An electric shock can be as well administered to twenty persons as one; they have only to join hands with him in contact with the conductor, and the fluid will pass through them all. See *Galvanism*.

ELECTRO-PUNCTUATION (Latin, *pungo*, to prick). The operation of inserting two or more needles in a part or organ affected, and then sending a current of electricity through them, by bringing them into connexion with the poles of a machine or battery. See *Electricity*.

ELECTUARY (Latin, *electuarium*.) Any preparation of powdered drugs made up with treacle, honey, or syrup, was formerly so called, but the term is not much employed in medical practice now, it having been superseded by *Confection* (which see). In the London Pharmacopœia, the term is rejected altogether, although those of Dublin and Edinburgh still retain it; and what we now call Electuaries are not the set formula of the colleges, but those extemporaneous prescriptions of a jamlike consistence which the physician sometimes prescribes in certain diseases, thus, as an example, we

give the following form of an Electuary for piles:—Take of Cream of Tartar and Powdered Jalap each 2 drachms; Powdered Ginger, 1 drachm; Milk of Sulphur $\frac{1}{2}$ an ounce; Confection of Senna (formerly called Lenative Electuary) 3 drachms; Syrup sufficient to reduce the whole to the proper consistence.

ELECAMPANE (Latin, contracted from *Enula campana*). The root of the *Inula Helenium*, of the natural order *Compositæ*, has a bitter pungent taste, and tonic and ex-



pectorant properties; it is used in cases of chronic catarrh, chiefly in combination with other medicines. The dose of the Powder is from 1 to 6 scruples; of the Extract 1 to 3 scruples; of the Decoction about a wine-glassful.

ELEPHANTIASIS (Greek, *elephas*, an elephant). This disease is a chronic swelling of the leg, which assumes a large misshapen appearance; hence the name. There are two forms of it, distinguished as *E. Arabum* of the Arabians, and *E. Græcorum* of the Greeks. In the West Indies it is sometimes called Barbadoes Leg, also Yam Leg, from its supposed resemblance to that vegetable in shape; the Ceylonese call it *Galle Leg*; and the dwellers in the Indian Peninsula, *Cochin Leg*. The Arabian form

is strictly a cutaneous disease, the cause of which does not seem to have been clearly ascertained; the skin of those affected by it becomes rough and tubercular, something like that of an elephant (another reason for the name); the tubercles, which are of various sizes, are of a dusky red, or livid colour, and appear chiefly on the face, ears, extremities, making the person affected by the disease a disgusting object; hence the name *Satyriasis*, like a wild man or satyr. The large misshapen leg no doubt arises from repeated effusion of lymphatic and gelatinous matter in the cellular membrane under the skin, in consequence of inflammation of the lymphatic glands and vessels.

We see but little of this disease in England; it is chiefly confined to hot and imperfectly cultivated countries; such cases as do occur here are chronic, having commenced abroad, and perhaps years ago. But little can be done for them, and only professional treatment is likely to be of any service. See *Skin Diseases*.

ELEMI. The resin of the *Amyris Elemifera*, commonly called Gum Elemi; its only medical use is to form the Compound



Elemi Ointment (*Unguentum Elemi Comp.*), sometimes employed to keep open issues and setons.

ELEVATOR (Latin, *elevo*, to raise). A name given to certain muscles, on account of their action, and also to an instrument

used for raising depressed portions of the *Cranium* (which see), and *Trepanning*.

ELF-SIDENNE (literally elf-squatting). The old Anglo-Saxon name for *Ephialtes*, or *Inebus* (which see).

ELIMINATIVES (Latin, *elimino*, to cast forth). Medicines used to promote the secretions: they may be divided into, 1st, *Sialogogues*, those which act upon the salivary glands; 2nd, *Expectorants*, those which promote the bronchial secretions; 3rd, *Cathartics*, those which cause increased action in the bowels; 4th, *Chologogues*, those which act on the liver; 5th, *Diaphoretics*, those which act on the skin; 6th, *Diuretics*, acting especially on the kidneys. (For fuller particulars of these, see their several heads).

ELIXIR (Arabic, *elikseir*, an essence or pure mass without any dregs). This term was formerly applied to compound tinctures, but is now chiefly confined to one or two preparations, such as the Elixir of Vitriol. or Aromatic Sulphuric Acid; Daffy's Elixir (which see), and Paregoric Elixir, that is, the Compound Tincture of Camphor. We are reminded of the alchemists and empirics of old by such names as the Elixir of Nature, applied to a Compound Tincture of Aloes; the Sacred Elixir, the same with Bhubarb; the Elixir of Health, Tincture of Scuna; Stomachic Elixir, Compound Tincture of Gentian; Elixir of Longevity, an Aromatic Tincture with Aloes; and the Anti-Arthritic Elixir, being a mixture of the three Tinctures of Aloes, Guaiacum, and Myrrh.

ELLAGIC ACID. This is a sort of punning name, being a backward reading of the word *Gallæ*, or Galls; it is applied to an acid whose presence has been detected in the process of making *Gallie Acid* (which see), and *Galls*.

ELYTRON (Greek for a sheath). A name for the *Vagina* (which see); hence we have *Elytrocele* (Greek, *kele*, a tumour), vaginal hernia; and *Elytroidis* (Greek, *eidos*, likeness), sheathlike, a term applied, 1st, to a membrane of the vagina called the *Tunica vaginalis*; 2nd, to a kind of *Pessary* (which see).

ELM. The inner bark of the well-known tree, the *Ulmus Campestris* of botanists, belonging to the *Ulmaceæ*, is slightly astringent, owing that property to the presence of Tannic Acid, of which it contains about three per cent.; it is also thought to be alterative, and is therefore given in chronic rashes, and other cutaneous affections. Its only official preparation is the Decoction, prepared by boiling 2½ ounces of the bruised

bark in 2 pints of water, until it is half evaporated.



EMACIATION (Latin *emacio*, to make lean). Wasting away. This may be looked upon as rather a symptom than a disease. It has been remarked by Dr. Watson that Emaciation occurs in complaints that are not commonly dangerous—as in dyspepsia, and hypochondriasis, which is often connected with dyspepsia—and when it does occur, it marks the reality of the disease. This wasting happens in many fatal maladies—in pulmonary consumption, for example—and in dropsy, although the dropsical enlargement sometimes masks it. It accompanies many acute diseases, and is reckoned an unfavourable symptom; for it shows that the body is not properly nourished. Sometimes the Emaciation is so extreme that the integuments give way, and the bones of the patient are said to come through the skin.

Simple diminution of bulk, it should be observed, is not always Emaciation; the former may be compatible with the appearance, and the reality, of perfect health; but with the latter there is always a change in

the colour of the skin, and an unhealthy appearance altogether.

EMASCULATION (Latin, *emasculo* to render impotent). Deprivation of the power of propagating the species. See *Castration*, *Testes*.

EMBALMING (French *embaumer*). The process of preserving dead bodies from putrefaction by filling them with gums and spices; an art much practised by some ancient nations; especially the Egyptians. See *Enterment*, *Putrification*.

EMBROICATION (Greek, *embrocho*, to moisten). An external fluid application, generally of an oily or saponaceous nature. See *Liniment*.

EMBRYO (Greek, *em* in, *bryo* to bud forth). The ovum or germ in the uterus, or womb, is so-called before the fourth month, after which it is termed the *Fœtus*, (which see). From this root we have also *Embryology*, a description of the embryo; *Embryotomy* and *Embryalcaia*, the operation of opening the foetal head in order to effect a deliverance; and *Embryalicus*, a blunt hook or forceps for the performance of this operation. See *Labour*.

EMETIC (Greek *emeo* to vomit). A substance capable of exciting vomiting, and this altogether independent of any effort of the stomach arising from quantity or flavour. Susceptibility to the action of this useful class of remedies varies greatly in different individuals, and is considerably modified by the nature of the disease for which they may be administered. When there is any morbid affections depending on, or in connexion with, over-distention of the stomach, Emetics are very useful, as the vomiting which they excite generally affords speedy relief; thus in impaired appetite, excess of acidity, intoxication, and poison, they are constantly resorted to, as well as in jaundice arising from obstruction of the biliary ducts; in catarrh, and phthisis, and dysentery, where there is much mucus of which it is desirable to relieve the passages. They are also useful in nauseating doses in dropsies, hæmorrhages, constriction, and in any cases in which it is desirable to relax the muscular or other tissues. Emetics are dangerous or hurtful, where there is much debility, as their frequent use lowers the tone of the system; also where there is a determination of blood to the head, especially in patients of plethoric habit, in visceral inflammation, the advanced stages of pregnancy, hernia and prolapsus uteri. An emetic should always be administered in a fluid form, and its operation will be promoted by drinking some tepid diluent, such as warm

water, or bitter infusion, such as Camomile Tea.

The principal Emetics given to promote full and free vomiting are, Ipecacuanha Powder, dose 10 grains to 30, with a grain of Tartarized Antimony, of which 2 or 3 grains may be given by itself; Sulphate of Copper, $\frac{1}{4}$ to 5 grains; Vibriolated Copper 1 to 3 grains, Sulphate of Zinc 10 to 30 grains; the latter is perhaps best in cases of poisoning, and it should be repeated every quarter an hour, until the full effect is produced; if neither of the above can be readily obtained, a teaspoonful of strong Mustard may be mixed in warm water and swallowed, or a tablespoonful of common salt; irritating the fauces with a feather, or putting the finger far down the throat will often excite vomiting; and in cases like hydrophobia, or tetanus, where swallowing is out of the question, it may be excited by the injection of some emetic substance into the veins; the action in this case, however, is slow and somewhat doubtful. It should be borne in mind that mineral act more quickly than vegetable Emetics, and that the action of either will be more rapid in proportion to emptiness of the stomach.

In the chest diseases of Children, where there is much mucus without the power to expectorate, Emetics are especially serviceable, and they may be given frequently; for very young children Ipecacuanha Wine is the best form of administration, from 10 drops to 30 according to age, in a little sweetened water. In some cases of incipient disease, where there is coldness of the skin, and other symptoms of depression, a full dose of Ipecacuanha, with about 6 grains of Carbonate of Ammonia will have the effect of arousing the system. Cramps and spasmodic diseases, are often greatly relieved by Emetics, and asthma when nothing else will afford relief.

EMETIN. Is an alkaloid procured from the root of the *Cephælis Ipecacuanha* (which see); and *Emetic Tartar* is the Tartrate of Antimony and Potash; it is more commonly known as *Tartar Emetic* (which see); and *Antimony*.

EMMENAGOGUES (Greek *emmenia*, the menses, and *ago*, to induce). These are medicines which possess the power of promoting the monthly discharge, which is so essential to a state of health in certain conditions of the female system. They may be placed under four distinct heads: 1st. *Stimulating*, as antimonial and mercurial preparations, which are chiefly given to young persons and those who manifest peculiar insensibility of the uterus; 2nd. *Irritant*,

as Aloes, Savine, and Spanish flies, most useful in torpid and chlorotic habits; 3rd. *Tonic*, as preparations of Iron, cold baths and exercise, best suited for lax and phlegmatic habits; 4. *Antispasmodic*, as Assafoetida, Castor, and Pediluvia, weak, delicate, and irritable constitutions are those for which these are best adapted.

Some of these medicines appear to act upon the womb by stimulating the surrounding organs; others by their action on the nervous system; and others again by their tonic influence upon the system at large: the first-named action is that of Aloes, the second, Assafoetida, and the third Iron. See *Menstruation*.

The Emmenagogues which are principally used are:—Aloes, 5 to 15 grains; Ammonia (Carbonate and Subcarbonate), dose 5 to 20 grains; Aristolochia, 10 to 30 grains; Cantharides, 1 to 2 grains; Electricity; Ergot of Rye, 5 to 6 grains; Elemi Gum, 10 to 30 grains; Galbanum, 10 to 30 grains; Iron, Rust of, Tartarized, and Vitrolized, 10 to 30 grains; Iron, Sulphate of, 1 to 2 grains; Citrate of, 5 to 10 grains; Madder, $\frac{1}{2}$ a drachm to a drachm; Myrrh, 10 grains to 1 drachm; Opoponax, 10 to 30 grains; Savine, 10 to 30 grains.

EMMENIA (Greek *em* in, and *men*, a mouth). The catamenial discharge. See *Menses*.

EMOLLIENTS (Latin *emollio*, to soften). Medicines which have the power of relaxing and softening the animal fibre when applied to it; such power have heat and moisture, oily and fatty matters, and they exert it without the aid of mechanical action: when employed to obviate the effects of any acrid or stimulating substances, they are called *Demulcents* (which see). Emollients are chiefly useful in the treatment of inflammation, either local or general, in diseases of the urinary organs, and in cases of poisoning by acrid substances. An alleviation of symptoms is all that can be looked for from this class of medicines, which may be arranged thus:—*Humectant, Relaxing, Lubricating, and Atonic* Emollients.—Those most used are:—Almond Emulsion, Expressed Oils, Figs, Common and Marsh Mallows, Mucilages, Liquorice, Lard, Opium, Raisins, Spermaceti, Pediluvia, Warm Water, and Vapour Baths.

EMPHYSEMA (Greek *emphysao*, to inflate). A swelling produced by air diffused in the cellular tissue of the body, it may be by its escape from the lungs or windpipe, in consequence of a wound, or an ulcer of the mouth or nostrils, or of the trachea or larynx, or a rupture of the air-cells, with-

out any external wound, may admit of an escape into the cellular tissue of the lungs, and thence to other parts of the body; or there may be a perforation of the walls of the chest, with or without injury to the lung itself; in all these cases it is termed *Traumatic Emphysema*; while that which is caused by a development of gas within the cells, which, when it does occur, is most usually a consequence of gangrene, is termed *Spontaneous Emphysema*. If the inflation is altogether confined to the lungs, it is distinguished as *Pulmonary*, or *Interlobular*, according to the part of the organ which is affected by it; among the *symptoms* of these last kinds may be mentioned shortness of breath, often very severe, especially after exercise, difficulty of breathing, palpitation of the heart, coldness of the extremities, and a livid colour in the face and lips, a slight cough, and scanty expectoration; after awhile the legs begin to swell, a proof that the Emphysema is affecting the whole of the tissues—becoming, in fact, traumatic.

The *treatment*, in the first case, will be to afford relief when the paroxysms are on, by means of opiates and anti-spasmodics, such as the following:—Take of Laudanum, 1 drachm; Sulphuric Ether, 2 drachms; Camphor Mixture, 4 ounces; a fourth part to be given every three hours until relief is afforded. The patient should not lie, but sit with the shoulders raised, and have plenty of fresh air; if the bowels are in a state likely to produce flatulency, carminative aperients should be administered. When it passes into the traumatic state, in which the peculiar elastic swelling extends to the legs, arms, and other parts of the body, the treatment should be much the same as in *Dropsy* (which see). If it originates in this state, and is caused by a wound, or a fractured rib, in the first case it will be well to enlarge the orifice of the wound, if it can be done with safety, to prevent the valvular action which causes the retention of the air: in the second, the bandage which is generally applied for such a fracture will arrest the further progress of the mischief; should tight bandaging interfere with respiration, small punctures should be made in the skin with a lancet to allow of the escape of the air; this latter treatment may be practised all over the surface of the body where the air has collected, and this, indeed, is all that can be done in many cases of *Emphysema*, especially those arising from spontaneous generation of gas in the tissues (which see).

EMPIRIC (Greek *em* in, and *peira* experiment). Formerly applied to one who prac-

ticed medicine upon experience, without regard to the rules of science; but now, to a vendor of nostrums. See *Quackery*.

EMPLASTRUM (Greek *emplasso* to spread). The Latin for *Plaisters* (which see).

EMPLOROTHOTONOS (Greek *emplorosthen* before, *teino* to draw). Chronic Spasm, which draws the body forwards. See *Spasms*.

EMPYEMA (Greek *em* within, *pyom* pus). A collection of pus in the cavity of the thorax; the term was applied by the ancients to every kind of internal suppuration; that which we so distinguish is the result of chronic *Pleurisy* (which see) and *Lungs*.

EMPYREUMA (Greek *empyreuo*, to set on fire). A peculiar vapour produced by destructive distillation, to breathe which is injurious; from that of vegetable substances we obtain Empyreumatic Acid and Oil; burnt Hartshorn yields Empyreumatic Alkali. When pastry or other articles of diet are subjected to great heat in a close oven or vessel, they emit an unpleasant effluvia, a proof they have become empyreumatized, and therefore unwholesome. See *Baking*.

EMULGE (Latin *emulgeo*, to milk out). A term sometimes applied to medicines which excite the flow of *Bile* (which see).

EMULGENTS (same root). The arteries and veins of the kidneys, which were formerly supposed to strain or milk out the serum. See *Kidneys*.

EMULSION (same root). A mixture of oil or balsam and water, the particles of which are made to unite by means of muelage, sugar, yolk of egg, or alkali; the most familiar example of an emulsion which we can give is the common salad dressing; here the oil and egg are first beaten up together, and then vinegar is added to give it the necessary acidity, and reduce it to a creamy consistence; milk is itself a natural emulsion, and is a good vehicle for mixing some gummy or oily substances—such as Camphor, Castor Oil, Turpentine. Several preparations which used to appear as Emulsions in the old Pharmacopœias are now called mixtures. The following is a most agreeable Emulsion for a cough:—Take of Sweet Almonds 1 ounce, blanch them, and rub them down in a mortar, with Powdered Gum Acacia and Lump Sugar of each 2 drachms, add hot water 1 pint, mix and strain through muslin; add Paregoric Elixir 2 drachms. Take a tablespoonful or two occasionally.

ENAMEL. The exterior surface of the *teeth* (which see). It is composed, according to Berzelius, of Phosphate, Carbonate, and Fluuate of Lime, Magnesia, Soda, Membranes and Water, and forms a hard crust over the whole exposed part of the tooth.

ENARTHROSIS (Greek *en* in, and *arthron* a joint). The ball-and-socket joint, as that of the head of the femur with the hip, and of the humerus with the glenoid cavity of the scapula.

ENCANTHUS (Greek *en*, and *kanthos* the cornea of the eye). A disease of the *caruncula lachrymalis*, of which there are two species, distinguished as *benigna*, or the mild; and *maligna*, the malignant or inveterate. See *Caruncle*, *Eye*.

ENANTHESIS (Greek *en* within, and *anthos* to blossom). A rash thrown out in *Scarlet Fever*, *Measles*, *Nettle-rash* (which see).

ENCEPHALON (Greek *en*, and *kephale*, the head). A term applied to the parts generally within the skull. See *Brain*.

ENCEPHALITIS (same root). Inflammation of the brain, as distinguished from *arachnitis*, or *meningitis*, inflammation of the membranes. From the same root, with *kele* a tumour, we have also *Encephaloccele*, hernia of the brain; and from the same again, with *eidos*, likeness, *Encephaloid*, a term applied to a morbid growth resembling the brain in its convolutions, and *Encephalosis*, a cut surface which resembles the brain.

ENCYSTED (Greek *en*, and *kystos*, a cyst). A term applied to tumours which consist of matter contained in a sac or cyst.

The origin of *Encysted Tumours* is somewhat obscure; they commonly occur in the head, and often attain the size of a bantam's egg, having a very unsightly appearance, especially if there is but little hair to hide them. They are tolerably firm, indeed almost cartilaginous in their structure, and are filled with a thick cheesy matter. No medical treatment will reduce their size, and nothing remove them but the knife; the excision is not difficult to effect; it is but to cut freely through the skin and let the contents escape, then tear out the bag, which is attached but slightly to the scalp, or other part. Be careful to remove every portion of it or the tumour will be reproduced. The bleeding is not generally great, as only the smaller superficial vessels are involved in the operation; in the head it is not sufficient to cause serious inconvenience, and at any other part, it is easily stopped; it is best, however, that none but a surgeon should attempt to operate for a tumour of this kind, in any other part than the scalp, for fear of injury to nerves, or some important vessels. See *Tumours*.

ENDEMIC (Greek *en*, and *demos*, a people). Diseases peculiar to the inhabitants of particular districts or countries are so called; they commonly owe their origin to some

impurity of the air, arising from the evolution of noxious gases, liberated in the decomposition of vegetable or animal matter. Among the most prevalent kinds may be named *Ague*, which is the chief endemic disease of marshy countries or localities; *Goitre*, Swelled Throat, or Bronchele, prevailing chiefly in the Alps; and the *Plica*, or Plaited Hair of Poland (all of which see). It may be further observed that the word Endemic bears pretty much the same signification in relation to the diseases of a country, that the term indigenous does to its plants.

ENDERMICS (Greek *en* in, and *derma* the skin). Medicines which are applied to the skin, and so act upon the system through the absorbents; of this class are *Iodine* and *Mercury* (which see); they produce the same constitutional effects as when swallowed, but do not so affect the delicate membrane of the stomach, and may therefore be more safely administered in this way, if there is time to await their slower operation, which is frequently not the case. The endermic method of treatment has never been very extensively followed, as it entails considerably more trouble than that of administration by the mouth, and occupies a much longer portion of time; yet many arguments may be used in its favour, and especially in cases where the frequent administration of drugs has impaired the powers of the stomach.

ENDIVE. A garden plant, sometimes used as salad; it is wholesome. The wild endive, *Chicorium intybus*, is used to adulterate ground coffee. See *Chicory*.

ENDOSMOSIS (Greek *endon*, within, and *osmos*, impulsion). The property by which rarer fluids pass through membranous substances, into a cavity or space containing a denser; when the thinner fluid passes out of the cavity which contains it into a surrounding denser fluid it is called *Exosmosis* (which see). These terms were introduced into scientific nomenclature by the French chemist Dutochet, who considers that the phenomenon to which they refer is owing to what he calls intercapillary electricity, an opinion grounded partly upon the experiments of his countryman Porret, who found that when two liquids of different levels are separated by a membrane, they may be brought to a level by establishing an electrical current between the two, thus rendering the membrane permeable. M. Poisson, however, has demonstrated that Endosmosis may be the result of capillary attraction, joined to differences in the affinity of heterogeneous substances. But, whatever

the principle involved in the phenomenon, the fact remains the same, and it may be exhibited by a very simple experiment, as thus:—Partly fill a small glass tube with coloured syrup or gum water, and tie over the open end a piece of bladder; immerse the end so secured in pure water, and notice the height at which the fluid stands in the tube: in a few hours it will be seen to have risen considerably, by reason of the water which has passed into it by *endosmosis*; now fill the tube with water, tie it over as before, and immerse the end in the denser fluid; instead of rising in the tube it will be found to sink rapidly, and what remains of it will be coloured by the syrup, or mucilage, as the case may be; into the denser fluid it has passed out of its receptacle by *exosmosis*.

Thus it is, as we believe, that the saline or other thin solutions in the stomach pass into the veins, and mingle with the blood, which is considerably thicker than they; and thus it is that some substances which are swallowed may be detected in the urine very shortly afterwards; indeed, it seems likely that the whole theory of absorption, which performs so important a part in the animal economy, may rest to a great extent upon this basis.

ENEMA (Greek *eniemi* to inject). A clyster or glyster, lavement or injection. A formula used for conveying both nourishment and medicines to the stomach under particular morbid circumstances. (For forms of preparation see Glysters: for proper instruments, see *Syringe*.)

ENECIA (Greek *enekes*, continuous). A term applied to continuous action, as in some inflammatory fevers, such as typhus, &c. (See *Fevers*.) These were formerly called *continuentes*, because they were supposed to be unattended by any change or relaxation whatever.

ENNUI. This is a French word, signifying listless fatigue of the mind, more frequently resulting from want of employment of the mental powers, than from the reaction of over exertion. Those affected by *ennui* are generally the idle and thoughtless; and no better cure for the disease, for such in some cases it really is, can be recommended than active and useful employment. We say to persons who are thus afflicted—Why stand ye thus idle when there is so much work to be done? Why waste the precious time which God has given for your own benefit, and that of your fellow-creatures? Do something that shall be useful and beneficial to yourself, if not to others; although the latter ought to be a great aim and object of

your existence. Industry like virtue is its own reward; it conduces to health both of mind and body, but idleness consumes both, as rust does metal, and one of the most obvious signs of this wasting of the mental powers is *ennui*.

ENS (Greek meaning literally any being or existence). Applied in chemistry to a substance supposed to contain all the qualities or virtues of its ingredients: hence we find in old medical works *Ens Martis* or *Ens Veneris*, formerly called Martial Flowers, now Ammoniated Iron (*Ferrum Ammoniatum*). This is a Muriate of Ammonia and Iron.

ENSIFORM (Latin *ensis* a sword). The xiphoid or sword like cartilage of the *Sternum* (which see).

ENTASIS (Greek *entaso* to stretch). A term denoting extension or stretching, applied to constrictive spasm, including *Cramp*, *Wry-neck*, *Locked-jaw* (which see).

ENTERA (Greek for the bowels, from *entos* within). A term applied to the intestines; hence we have also *Enteric* belonging to, and *Enteritis*, inflammation of the intestines, that is of their serous coat; this may be either chronic or acute, and should be distinguished from inflammation of the peritoneum, called *Peritonitis*, (which see). A very common name for the above disease is Inflammation of the Bowels, but as the symptoms vary considerably, according as the part attacked is the large or small intestines, so must the mode of treatment. When the duodenum is alone the seat of disorder, we have impeded digestion, resulting in constipation and sickness; when there is general inflammation of the small intestines, there is also constipation with usually severe pain and fever; and when the lower or larger intestines are the seat of mischief, we have very frequently diarrhoea and dysentery: as subsidiary symptoms we may mention, in the first case, pain after eating, slight vomiting, a small quick pulse and arid dry tongue, with sometimes the appearance of jaundice; in the second, arid and shining tongue, great thirst, tenderness on pressure, and flatulent swelling of the part affected, with small and frequent pulse, and loathing of food, but no vomiting, sometimes also loose bowels, but more generally the reverse; in the third we have most, if not all of the dysenteric symptoms, and the treatment must be according thereto. When the whole of the intestines are affected, we have usually the severe form of disease, called by some *Gastro-enteritis*, that is *Bilious or Gastric Fever*. See *Bile*, *Fever*.

ENTEROCELE (Greek *entos*, and *kele* a tumour). A Hernia, the contents of which are intestine, and

ENTERO-EPIPLOCELE (same root with *Epiploon*, *omentum*). A Hernia, the contents of which are both intestine and omentum; see *Hernia*.

ENTERORAPHIA (Greek *entos*, and *raphe* a suture). A cleft in the divided edges of an intestine.

ENTEROLITHUS (Greek *entero*, the intestine, and *lithos*, a stone). An intestinal concretion. See *Calculus*.

ENTOZOA (Greek *entos* within, and *zoe* life). Intestinal *Worms* (which see).

ENTROPIUM (Greek *en* and *trepo* to turn.) Inversion of the eyelids, causing the lashes to rub against the eyeball; the reverse of this, in which the inside of the lid is exposed, is called *Extropium* (which see) and *Eye*.

ENURESIS (Greek *en*, and *oureo* to make water). Incontinence of *Urine* (which see).

EPANETUS (Greek *epaniemi*, to remit). A term sometimes applied to remittent fevers, whether of the mild, the malignant, or hectic form. See *Fevers*.

EPHELIS (Greek *epi*, upon or for, and *elios*, the sun). Dark freckles on the skin, which only appear in hot weather. See *Sunburn*.

EPHEMERA (Greek *epi* and *emerha*). A fever which runs its course in twelve hours. See *Fevers*.

EPHIALTES (Greek *epi*, and *allocai* to leap). *Incubus* or *Nightmare* (which see).

EPHIDROSIS (Greek *epi*, and *idroo*, to perspire). Profuse and morbid perspiration, (which see).

EPHIPPIUM (Greek *epi*, and *ippos*, a horse). A saddle. A part of the *os sphenoides*, so called from its saddle-like shape. See *Skull*.

EPIUM. A term denoting a raspberry, and applied on the American coast to *Frambæsia* (which see). On the African coast this disease is called *Yaws* (which also see).

EPICRANIUM (Greek *epi*, and *kranion*, the skull). Applied to the integuments and epineurotic expansion which lie over the *Cranium* (which see) and *Skull*.

EPIDEMIC (Greek *epi*, and *demos*, the people). Diseases which prevail among a large portion of the people of a country; rage for a time more or less long, and then gradually diminish and finally disappear, to return again at periods more or less remote. The most familiar example of this class of diseases is, perhaps, *Influenza* (which see).

This appears to be more independent of endemic, or local causes, than most others of its class. Cholera is also an epidemic disease, coming we know not where, and going we know not whither, truly "the pestilence which walketh in darkness;" although there is no doubt that its development is greatly favoured by an impure state of the atmosphere, and other local circumstances which have for it a peculiar attraction. *Scarlet Fever, Measles, Small Pox*, and several other eruptive forms of disease are also, to a certain extent, epidemic, although they are disseminated by contagious influences, which have been well ascertained to be more potent and speedy in their operations under certain circumstances: poverty, and dirt, and vicious indulgences, render persons especially liable to their attacks, and although the reason of their visitations to particular places cannot always be discovered, yet it is well known that the coming of the greater and more pestilential epidemics, has generally been preceded or accompanied by striking meteorological vicissitudes, such as great extremes of heat and cold, drought and moisture; so it was in olden times with the visitations of plague, now happily unknown amongst us, and so it has been of late years with Asiatic cholera, the first extensive diffusion of which can be traced to a swampy district at the mouth of the Ganges, after a very wet season.

Not always are epidemic influences confined to man, the lower animals suffer from them, and it has even been observed that birds have forsaken districts in which these influences have prevailed.

Thanks to the spread of cultivation, which has greatly cleared the lands of decayed vegetable matter, and dried the swamps, and to improved sanitary arrangements in our towns, we know little or nothing of those frightful epidemics, which spread terror and devastation through wide districts—such as the Plague at Athens, 430 years before Christ; the Black Death, or Plague, of our own country in the fourteenth century; the Sweating Sickness of the fifteenth; the Great Plague of London in the seventeenth. No cry of "Bring out your dead!" now sounds dolefully in our streets; nor does the fatal red cross, marked upon the door, indicate that the inhabitants of that house are smitten by the Angel of Destruction, and cut off from all communication with their affrighted fellow citizens. The Plague of eastern countries, of Egypt especially, does not visit our shores; true, we have had Cholera from the Orient, and its visitations

have been very fatal, but nothing to the plagues and pestilences of former times, and of some countries at the present day. The few and comparatively harmless visitations which we do have, should be as warnings to us. Let us cleanse our streets and houses, and keep our highways clear of decomposing matter; let our rivers flow fresh, and free, and sweet, and pure; make them not receptacles for all the filth and offal of crowded cities, or we may expect, and shall surely have fatal epidemics amongst us again, to lay low alike the young and the old, and send the voice of lamentation through the land, as on former occasions of national sorrow and humiliation. See *Pestilence, Plague*.

EPIDERMIS (Greek *epi*, and *derma* the skin). The cuticle or scarf skin; see *Cuticle, Skin*.

EPIDIDYMUS (Greek *epi*, and *didymoi* two). The small oblong body which lies along the *Testes* (which see).

EPIGASTRIUM (Greek *epi* and *gastro* the stomach). The upper part of the *Abdomen*, (which see), and *Stomach*.

EPIGLOTTIS (Greek *epi* and *glottis*). A cartilage of the larynx situated above the *Glottis* (which see).

EPILEPSY (Greek *epi* and *lambano* to seize). This, which belongs to the class of convulsive diseases, is one of the most terrible which can affect mankind. It comes on at irregular periods, and the attack is for the most part sudden, and without any warning; the patient may be about his ordinary occupation, or talking cheerfully with his friends, who are perhaps startled by a loud and fearful cry; a convulsive spasm passes over the face, which is drawn on one side, the lower part of it being turned to one shoulder, the eyes are set and staring, or rolling wildly in the head, the colour of the skin becomes dark and livid, and the veins swollen and turgid, there is frothing at the mouth, and a kind of choking noise in the throat; all control over the limbs is lost, and the body falls to the ground unless supported. Sometimes the arms are thrown about at random, while the fingers clutch at whatever comes in their way, digging the nails deeply into it, if a soft substance; the tongue is bitten through by the teeth, and the struggle, as against some invisible enemy, is frightful to look upon. After a shorter or longer period, the convulsive movements gradually diminish, and the patient seems to recover a faint glimmering of consciousness, but the look which he casts around is stupid and heavy, and he goes off into a léthargic sleep, from

which he does not awake for some hours; even when he does, his mental perceptions appear to be very much blunted, and it may be days before he fully recovers from the effects of the attack. This is a severe form of Epilepsy; it constantly occurs in milder forms, and is sometimes so light as to cause only a temporary inconvenience. We have said that there is no warning of the attack; but this should be understood to apply to lookers on; for the patient is generally aware when one is impending, by certain symptoms, which, after the occurrence of one or two paroxysms, he knows how to distinguish. These symptoms vary, according to constitution and temperament; they may be lowness of spirits, with unusual irritability, diminution or increase of energy, dizziness, noises in the ear, specks floating before the eyes; but the most marked symptom is called the "epileptic aura," a kind of creeping sensation, felt first at the extremity of a limb, and then gradually extending over the whole body, and into the head.

EPINYCTUS (Greek *epi*, and *nyktos*, night). A pustular eruption, so called, because it was first supposed only to appear in the night, an impression, probably produced by its being then most troublesome. When the term is now used, it is applied to *Ecthyma*, (which see), and *Skin Diseases*.

EPIPHORA (Greek *epi*, and *phero*, to carry with force). A flux of tears, causing what is termed a watery eye; it arises from an abundant secretion, and not, as is the case, in *stillicidium lacrymarum*, from an obstacle to the absorption and conveyance of the tears from the *lacus lacrymarum* into the sac. See *Eye*.

EPIPHYSIS (Greek *epi*, and *phyo*, to grow). A process of a bone, attached by cartilage. Compare *Apophysis*.

EPIPLOCELE (Greek *epi-ploon*, omentum, and *kele*, a tumour.) Hernia of the *Omentum*, (which see) and *Rupture*.

EPIPLOON (Greek *epi*, and *plco*, to sail). The omentum; so called from its lying loosely or floating upon the intestines.

EPIPLOSCHOECELE (Greek *epiploon*, *oscheon*, the scrotum, and *kele*). A Hernia in which the omentum descends into the scrotum. See *Hernia*.

EPISCHESIS (Greek *epi*, and *ischo*, to restrain). Obstruction or suppression of excrement. See *Constipation*.

EPISPADIUS (Greek *epi*, and *spao*, to draw). A kind of malformation, in which the urethra opens in the dorsum of the *Penis*, (which see) and *Hypospodias*.

EPISPASTIUS (Greek *epi*, and *spao*, to draw).

This is a term applied to whatever application has the power of producing a discharge of serum or pus, by exciting a previous active inflammation or suppuration; it consequently includes blisters, issues, and setons, but is most commonly restricted to the first of these; (which see) also, *Rubefacients*, which are but a milder kind.

EPISTAXIS (Greek *epi*, and *staxis*, a dropping). A term sometimes applied to *Bleeding at the Nose* (which see).

EPITHELIUM (Greek *epi*, and *tithemi*, to place). The cuticle on the prolabium, or red part of the lips, and on the mucous membranes in general; it is the same as the epidermis on the more exposed parts of the body.

EPITHEM (same root). A lotion or other external application. There is now an Epithem Company established for the exclusive preparation and sale of an article called *Piline* (which see), by means of which fomentations, lotions, poultices, &c., can be applied to any part, in a very clean and convenient manner. This *Spongea*, or *Impermeable Piline*, may be obtained of any druggist, with directions for use.

EPSOM SALTS. This is the old *Sal Catharticus Amara*—Bitter Carthartic Salt. It was formerly prepared by evaporating the mineral waters of Epsom; but modern science having shown its nature and composition, a much easier and cheaper mode of preparation came into play; its more correct name, Sulphate of Magnesia, indicates pretty clearly that it is a compound of Magnesia and Sulphuric Acid. It is, perhaps, the most generally used of all known purgatives—certainly of all those of a saline nature; yet considerable mischief undoubtedly results from its common and indiscriminate use; for, although it is well suited for persons of a full plethoric habit, and is a most valuable medicine in many diseases—being tolerably certain in its action, griping but little, if at all, and producing free watery discharges—yet it is too weakening to be taken frequently by those of delicate constitutions, and especially when swallowed as it most commonly is, in the form of a strong solution. The flavour being very nauseous, it is the great object with those who are necessitated to take it, to make the dose of liquid as small as possible; but in this they greatly err; in too concentrated a form it induces a discharge of the serous, or watery portion of the blood, into the bowels, and thus seriously debilitates the system, besides causing a tendency to constipation, directly its action has ceased. From $\frac{1}{2}$ a drachm to 1 drachm of these salts, dissolved

in a tumbler of water and so taken, would have a better effect, and be safer in its operation, than five or six times the quantity in a wineglassful of the liquid; the drink is not pleasant, but it may be taken, and the best time is before breakfast in the morning. To correct any tendency to griping or flatulency, it is best to add something warm and aromatic; the following is a good form of preparation: Take of Epsom Salts, 1 ounce; sliced Ginger Root, 2 drachms; a few bruised Cloves; add boiling Water, 1 pint; let it stand two hours, then strain into a wine bottle, and fill up with Peppermint Water. Dose—a tumblerfull every morning fasting, while required. Persons suffering from habitual constipation, will commonly find relief from this remedy, which, however, is scarcely fit for the weak and aged, for the reasons already stated. By persons of scrofulous and selerotic habits, Epsom Salts, in combination with Iron and Acid, may be taken with advantage, as thus:—Sulphate of Magnesia, 6 drachms; Sulphate of Iron, 12 grains; diluted Sulphuric Acid, 1 drachm; plain or Peppermint Water, 12 ounces; mix, and take 1 tablespoonful three times a-day. Perhaps the most agreeable, and certainly the most elegant form in which this Salt can be administered, is dissolved in an infusion of Roses; the mixture may be thus prepared:—Take of Sulphate of Magnesia, 1 ounce; red Rose Leaves, dried, 3 drachms; add a pint of boiling Water; let it stand two hours, then strain, and add diluted Sulphuric Acid, 1½ drachms; lump Sugar, 6 drachms. Dose—a wineglassful once or twice a-day, or as often as required. If there is great debility of the stomach, ½ a grain of Sulphate of Quinine may be added to each dose of either of the above mixtures which contain acid; besides acting as a tonic, this appears to increase the aperient property. One of the most convenient, and best occasional purgative in use, is the Epsom Salts in combination with Senna, a mixture generally known as the Black Draught. A form of preparation will be found under the head of *Draught*.

We have already spoken of Coffee as a good vehicle for the administration of Epsom salts. A simple infusion, however, of the berry will not develop the aroma sufficiently to hide the nauseous bitter of the Sulphate, of which 1 ounce, with 2½ drachms of ground Coffee, should be boiled in a pint of Water for about two minutes in a glazed vessel: before straining, let the mixture stand for about 10 minutes, then bottle and sweeten to taste; a wineglassful or more may be taken when required; this is

a favourite formula with the French physicians, from whom we obtain the recipe.

One ounce of the Sulphate of Magnesia dissolved in a pint of warm Water is a good injection for those troubled with ascharides or thread-worms: its utility in inflammatory diseases, in small and repeated doses, combined with Acetate of Ammonia and other febrifuges, is universally acknowledged; and its consumption among all classes of the community (especially the poorer ones), must be truly enormous. The small pointed, transparent, colourless crystals of these salts very closely resemble those of Oxalic Acid—a most virulent poison; and fatal accidents have resulted from mistaking one for the other, there is, however, a very simple test, take a small crystal, and put it on the tongue—if it have an intensely acid and burning taste it is not Epsom salts, which is simply disagreeable and slightly bitter. See *Purgatives*.

EPULIS (Greek *epi* and *oyla*, the gums). A small tubercle on the gums, which is thought sometimes to become cancerous. See *Gums*.

EPULOTICS (same root as above). Medicines which dry up the moisture of wounds, are sometimes so called.

ERECTILE TISSUE (Latin *erigo*, to erect). The tissue peculiar to the penis, nipple, &c.; that of the vagina has been termed *rectiformis*, and lately *corpus cavernosum vaginae*. There is also a similar tissue constituting *Nævus* (which see). From the same root comes

ERECTOR. A muscle of the *Clitoris*, and of the *Penis* (which see).

ERETHISMUS (Greek *erethiso*, to excite). Constitutional irritation, sometimes called into action by mercury, in which case it is termed *E. mercurialis*, or Mercurial Erethism.

ERGOT OF RYE (Latin *Secali cornutum*). There is considerable diversity of opinion as to the real nature of this substance, which is a strong vegetable irritant; but most believe that it is a diseased production of the grain, a kind of fungoid growth developed thereon; the grain so affected being sometimes called “spurred rye,” from the peculiar curvature of the growth, which resembles in shape a cock’s spur, and sometimes attains the length of an inch and a half, varying from ½th to ¾th of an inch in thickness, and being of a black colour. It is found on some other grains, but chiefly on rye, and is a most valuable adjunct to the accoucheur, on account of its specific action on the womb, which it causes to contract, and thus expedites the process of par-

turition. It is also said to be useful in arresting uterine hæmorrhage, and in counteracting many morbid conditions to which the uterus is liable, especially those proceeding from a bad state of the vessels. The dose is from 10 to 30 grains or more, in powder, given in Treacle or Jam, and repeated every half-hour. The Powder loses much of its efficacy by keeping, and is, too, sometimes adulterated with linseed meal; and when this cannot be depended on, it is best to use a Decoction, made by boiling 4 ounces of the bruised grain in 2 pints of Water until half is evaporated, then strain; give a tablespoonful every half-hour; or use the tincture of the Dublin Pharmacopæia, dose 10 to 60 minims; or the Etherial Tincture of the London, which is twice as strong.



In countries where rye is largely cultivated, its being taken in a diseased state is said to have given rise to epidemic diseases of a gangrenous character, not preceded by fever, inflammation, or any considerable pain; the early symptoms being numbness, cold and livid skin, dull heavy pain, and swelling; eventually the gangrene seizes upon the nose, fingers, or other part, which drops off. This disease has received the name of

ERGORISM; one of its forms is the *Convulsive*, which is characterized by violent

spasmodic convulsions; and the other, the *Gangrenous*, which we have just described. It is known in Germany, where it chiefly occurs, as the Creeping Sickness.

ERODANTS (Latin *credo*, to gnaw off). Substances which eat away, as it were, extraneous growths. (See *Caustics*, *Escharotics*.) From the same root comes also

EROSION. Destruction by ulceration.

ERRATIC (Latin, *erro*, to wander). Wandering, irregular; applied to flying and shifting pains, like those of Gout, Erysipelas, Gestation, &c.

ERRHINES (*en in*, and *rin* the nose). Substances which create sneezing, and an increased secretion of the mucous membrane that lines the nostrils, called the pituitary membrane. Several different drugs are contained in this class, whose operations vary greatly in intensity and duration; they may generally be referred to two orders—namely, *Sternutatory*, such as Tobacco, Hellebore, Euphorbium, &c.; and *Evacuating*, as Asarum, &c., which last are more calculated for aged and infirm persons.

Great virtues are sometimes attributed to this class of remedies, but we question if permanent benefit is ever derived from them. There can be no doubt that they do occasionally afford relief in head or ear-ache, neuralgic pains, and some cases of ophthalmia, but their action is purely that of local stimulants, and, not as some nosologists have supposed, by diminishing the quantity of fluid circulating in the vessels near to the parts to which they are applied; there is no vascular depletion occasioned by them, and the relief which they give is but temporary.

ERROR LOCI (Latin for error of place). A term formerly applied to certain derangements in the capillary system, but now scarcely ever used.

ERUCTATION (Latin *eructo*, to belch forth). This is a frequent rising of gaseous or other fluid into the mouth; it is a common symptom of dyspepsia and other forms of indigestion, to which those who overload the stomach are especially liable; its extreme form is called *Waterbrash*, (which see,) and *Flatulency*.

ERUPTION (Latin *erumpo* to break out). A term applied to acute cutaneous, or *Skin Diseases* (which see).

ERYNGO. The *Eringum Maratinum*, or Sea Holly, belonging to the natural order *Umbeliferae*, must be included among the medicinal plants, as it possesses demulcent and expectorant qualities. The root, commonly sold as Candied Eringo, is washed and slit, and prepared with syrup; it is pleasant to the taste, and useful in coughs

and inflamed states of the bronchial passages. We give a cut of the plant.



ERYSIPELAS (Greek *eryo* to draw, and *pelas* adjoining). This disease was so named by the ancients from its propensity to spread rapidly to the surrounding parts. The Romans called it *Ignus sacer*, bad or detestable fire; it has been popularly known as the Rose, from its bright red colour; and as St. Anthony's Fire, partly from its burning heat, and partly because the saint whose name it bore was supposed to have the power of curing it with a touch. There are several species of this disease, distinguished as *Phlegmonous*, *Edematose*, *Gangrenous*, and *Wandering*; but without going into the particular characteristics of each, it will be sufficient for us to state what are the general symptoms of Erysipelatous inflammation, and best remedial measures. We will first say a few words as to the cause of this inflammatory affection of the skin, which often commences very suddenly, and spreads with a rapidity truly alarming, especially, when as is often the case, it first makes its appearance on the head, face, or neck, and so involves some of the most delicate and susceptible organs of the human frame. Vicissitudes of cold and heat causing peculiar conditions of

the atmosphere, may be named among the most common *causes* of this disease, which frequently appears to originate in the slightest puncture or scratch of the skin, as also from wounds or sores; it is very contagious, and its appearance in a hospital ward is greatly dreaded, as wounds and amputated parts which up to the time of this visitation have been going on extremely well, frequently assume an inflamed, probably a gangrenous character, which leads to a fatal termination of the case. In a house where a confinement is taking, or is likely to take place, Erysipelas should be carefully guarded against, as there is undoubtedly a close connection between that and child-bed fever, which is so frequently fatal. On systems debilitated by any disease, whether acute or chronic, this inflammatory affection appears to seize with peculiar avidity, and to spread through the tissues of the skin most rapidly; it is when extending beneath this that it constitutes what professional men term *phlegmon*, meaning literally to burn—then it is that purulent matter forms, the parts slough, or mortify, and gangrene ensues. No unprofessional person should attempt to tamper with this condition of things; there must be a free use of the lancet to let out the morbid matter, and the most prompt and decisive line of action adopted; if a limb is so affected, or any part that can be excised, its removal will probably be necessary to give the patient a chance for life.

Among the predisposing causes of Erysipelas may be also mentioned want of cleanliness, insufficiency or bad quality of the food, and irregularity of living; there may be hereditary and constitutional predisposition, and where this exists, the inflammation is very easily excited, strong mental emotion, or a fit of inebriety, being sometimes sufficient to bring on an attack; it often co-exists with or immediately follows some fevers, in which it may be presumed that purulent matter enters into the venous circulation.

The *symptoms* of an attack are usually of a febrile character, such as shivering, headache, furred tongue, accelerated pulse, and often derangement of the stomach for a day or two previously; then there is a tingling, and burning sensation with stiffness and pain at some particular part, followed by a discolouration of the skin, and a slight elevation of the surface; the red or purplish tint is confined at first to one spot, but soon extends itself, and includes the limb or part affected; frequently this is the head, which, with the face, becomes so swollen and disfigured that the patient can-

not be recognised; the eyelids puff out and entirely close the eyes, and each avenue to the senses is for a time closed. In very bad cases delirium and coma come on, and death ensues from effusion on the brain; sometimes the patient dies from suffocation, the glottis being closed, on account of the internal swelling of the throat; and all this may take place in a few hours, so rapid is the progress of the disease. In the milder forms, the patient may be tranquil; until the swelling subsides, there will be a little wandering of the mind probably, more particularly at night, and uneasy restlessness from the pain and inconvenience of the swelling. As the redness extends from the part first affected, that part becomes paler, the swelling there subsides, and sometimes vesicles, like those caused by a scald, appear on the surface; if the inflammation is merely superficial, it is neither very troublesome nor dangerous; but when it becomes *phlegmonous*—that is, dips down and affects the deeply-seated tissues, there is great cause for alarm; when this is the case the colour is generally very florid, the tingling and the burning sensation severe, and the surface hard and firm to the touch. The young and sanguine are most likely to be affected in this way; those of a feebler habit more commonly suffer from the *edematous* form of the disease; in this the parts affected are of a paler red, and softer and inelastic, so that they pit on pressure.

There is a variety of Erysipelas called *Infantile*, which affects infants at birth; it commences generally at the navel, and extends quickly to the extremities, which are hard, firm, and much swollen, and prone to become gangrenous.

Treatment.—Having a certain course to run, whose period cannot be shortened, the great object of the medical attendant will be to conduct his patient safely through it; he will probably at first administer cooling aperients, or, if the tongue be foul, precede these with an emetic of Ipecacuanha and Tartarized Antimony, following it with 3 grains of Calomel, if the patient be of full habit, and soon after a Black Draught; bleeding may also be necessary, especially if the febrile symptoms run high; if there is much headache, leeches at the back of the head, and a blister between the shoulders, will be useful, or cupping at the back of the neck, with a mustard foot-bath. When the aperients have operated freely, give a saline mixture like this:—Sweet Spirits of Nitre 2 drachms; Sulphate of Potash, 2 drachms; Liquor of Acetate of Ammonia, 2 ounces; Camphor Mixture, 6 ounces: take two

tablespoonsful every four hours; or, if the stomach be irritable, give an effervescing mixture as thus:—Bicarbonate of Potash or of Soda, 2 drachms: dissolve in 6 ounces of water; sweeten with 2 drachms of Syrup of Orange peel: pour out two tablespoonsful in a wineglass, and add 15 grains of Citric or Tartaric Acid, the former is best of the two; but, better still, is a tablespoonful of fresh Lemon Juice: stir and drink while effervescing. The patient during this treatment must be kept on low diet, taking nothing but mild diluent drinks; but, should the strength rapidly decline, tonics must be administered: Quinine is the best, in 2 or 3 grain doses every four hours; let the vehicle be Wine; if the stomach will not bear this, try an enema of thin Starch, with 3 grains of the above tonic in it. Arrow-root, Flour, Powdered Starch, Magnesia, or Hair Powder should be dusted over the parts affected; should these not afford the desired relief, try bathing with Tepid water or Poppy fomentations: a line drawn round the diseased part with Caustic, so as to make a band about 1 inch in breadth, will frequently stop the spreading of the inflammation; care must be taken that no skin untouched by the caustic is left in the breadth of the band, or it may render the precaution nugatory. A lotion of Lunar Caustic, in the proportion of 1 scruple to 1 ounce of water may also be applied with a camel hair brush over the whole inflamed surface. In Phlegmonous Erysipelas, hot fomentations and poultices, leeches, and other depletive measures must at once be resorted to, and this, as before mentioned, should be under the direction of the medical adviser.

The proper treatment of Infantile Erysipelas is to foment the inflamed parts with a strong and hot Poppy Decoction, and give every hour or two a tablespoonful of Decoction of Bark, or of this mixture:—Sulphate of Quinine, 6 grains; diluted Sulphuric Acid, 12 grains; Tincture of Gentian, 2 drachms: a teaspoonful to be given every two hours. An enema of Beef-tea or Mutton-broth should be thrown up if the patient seems to require it.

Directly Erysipelas sets in, and especially if it appears likely to assume a severe form, all the hair should be cut or shaved off the parts near where it commences. If not severe, it is best not to discolour the skin by applying Caustic, but to use a lotion composed thus:—Sugar of Lead, 1 drachm; Rain or Distilled Water, 1 pint, mix; add Tincture of Opium, 1 drachm: wet rags to be kept applied. The following application for Erysipelas, and some other cutaneous

affections, has lately been recommended by high Continental authorities:—Alum, reduced to impalpable powder, 30 parts; White Precipitate, 1 part. Rub up well together, and place the powder in a bottle, and then add from 90 to 100 parts of Glycerine. Shake the bottle until the mixture assumes a creamy consistence, and repeat the shaking whenever the application is about to be employed. The chief characteristics of Erysipelas are its sudden appearance, red colour, tendency to spread, febrile symptoms, heat and tenderness of the skin, and blistered surface. We call especial attention to these, because many affections of the skin are thought to be this, although they bear but a slight resemblance to it.

ERYTHEMA (Greek *erythros*, red). Morbid redness of the skin, sometimes called Inflammatory Blush, and considered as a milder form of Erysipelas; from which, however, it differs in not being contagious, and yielding more easily to medical treatment. Nosologists distinguish 7 different species of this disease, viz.—Fugacious (*E. fugax*); Smooth (*E. lævie*); Marginated (*E. marginatum*); Papulated (*E. papulatum*); Tuberculated (*E. tuberculatum*); Nodose (*E. nodosum*); Fret, or Erosion of the Skin (*E. intertrigo*); these names all having reference to some peculiarity of form or colour in the eruption. Thus sometimes the surfaces are smooth and shining and marginated, or they are like small pimples or tumours, appearing generally on the face, breast, or arms; again they appear as red shining patches on the front of the legs, and sometimes on the arms, assuming a purplish tint after some days, like a bruise. This form appears to be almost peculiar to young women. Then there is the *red gum* or *tooth rash* of children, and the redness occasioned by irritating discharges, such as of the fauces in diarrhoea, or of tears when of an acrid character, or the chafing between the folds of the skin of children, which results from want of proper care in frequent washing and drying the parts. Sometimes after dancing or any violent exercise, drinking cold water when in a heated state, or eating too largely of fruit or other substances, red spots and patches will appear on the back, shoulders, and face, more particularly of young persons; and all these are different varieties of Erythema, one of whose peculiar characteristics is that the redness disappears on pressure of the inflamed part, but shows itself again in a second or two after the finger is removed.

The proper treatment for children is

bathing the part affected freely with hot water, and then drying thoroughly, and applying Powdered Starch or Violet Powder. Give, at bed-time, 2 or 3 grains of the Grey Powder (Mereury and Chalk), with a Senna Draught, or a dose of Castor Oil in the morning; following it up with small doses of Quinine, according to the age of the child. Should the inflammation not yield to this treatment, after a few days, use the Sugar of Lead lotions recommended for Erysipelas, and still proceed with the Quinine, to which rapidly spreading Erythema scarcely ever fails to yield. This course of treatment may be applied in most of the common forms of the disease to patients of all ages; but there are one or two exceptional forms to which it is not applicable, such as the *E. nodosum*, already alluded to as chiefly attacking young women, and of these such as are of a delicate constitution; it is especially likely to come on after scarlet fever or measles. As this is attendant on a debilitated state of the system, it requires nourishing food and strengthening medicine. For its removal some preparation of Iron, with Infusion of Quassia, and an aromatic tincture, or Cinnamon Water, will make a good mixture; or take the following:—Sulphate of Quinine, 12 grains; diluted Sulphuric Acid, 1 drachm; Compound Tincture of Cardamoms, $\frac{1}{2}$ an ounce; Infusion of Roses, 12 ounces: dose, two tablespoonfuls two or three times a day; change of air is also desirable.

The *E. tuberculatum* is not an uncommon form of the disease, generally showing itself on the face, especially of sedentary females. It is often called Erysipelas, but it is usually unattended with febrile symptoms, or constitutional derangement of any kind, and exhibits no tendency to spread rapidly. Local remedies are of little service in this case; indeed they are more likely to do mischief, by inducing congestion. When the disease is acute, a brisk mercurial aperient, followed by cooling saline medicines, may be of service; when it becomes chronic, Arsenic is the only remedy likely to cure it, and this will not always effect the object: it should be taken in the form of Fowler's Solution (see *Arsenic*). Plenty of walking exercise, with due care as to diet, and strict attention to the laws of health, are the grand specifics after all. See *Rashes, Skin Diseases*.

ERYTHRIC ACID (Greek, *erythraio* to redden). A substance procured by the action of Nitric on Uric, or Lithic Acid.

ERYTHROGEN (Greek, *erythros* red, and

gennao to produce). A green coloured substance found in the gall bladder in a case of jaundice, which being mixed with nitrogen produces a red compound.

ESCHAR (Greek, *escharo*, to form a scab or crust). This term is applied in surgery to what is called a dry slough, a decomposition of the animal organization, by means of some powerful caustic application.

ESCHAROTICS. Are those substances employed to produce the above result, because they have the power of eroding or dissolving animal solids, which they do either by combining therewith, and forming a soft pulp, or by causing the elements to enter into new combinations, and so destroying their cohesion and altering their composition. Thus their operation may in general be considered as purely chemical; produced in most cases by some peculiar affinity existing between them and the solids or fluids, with which they are brought into contact; so Nitrate of Silver, one of our commonest Escharotics, by the action of the muriatic acid continued in all animal fluids, is decomposed, and covers any part to which it is applied with a whitish film, which is in fact a Muriate of Silver. Escharotics differ greatly in the energy of their actions, some eroding merely the cuticle or external surface of the skin, as Nitrate of Silver and Sulphate of Copper; others, as Caustic Potash, and Quick lime, decomposing the animal matters to a considerable depth; with some too there is, besides the chemical, a specific action, not obtainable from others; of that class, Arsenic, may be named as an example.

We commonly find Escharotics classed under two heads, viz:—the *Potential Cauterants*, and the *Actual Caustery*, (see *Caustics*); the former being, as before observed, chiefly chemical agents. Among those most commonly employed to produce counter irritation, or remove fungoid or morbid growths of any kind, are the strong mineral acids, such as Sulphuric and Nitric; pure Alkalies, and some Metallic Salts, especially Nitrate of Silver. The actual cauterants such as Hot Water or Vapour, Moxa, or Heated Metal, are used for their primary or secondary actions; the first being the immediate destruction of the part to which they are applied, and the second to stimulate and arouse the nervous energy of the system, so as to enable it the better to meet and combat any disease with which it may be attacked. Atony and laxity of the muscular system, neuralgic pains, and even paralysis are sometimes materially relieved by these means.

ESCULENT (Latin, *esculentus*, good for

food). Eatable; a term applied to such plants, or any parts of them, as are fit for food. From the same root comes also *Esculine*, an alkaloid, obtained from the *Aesculus Hippocastanum*, or Horse Chestnut, said to possess febrifuge properties.

ESO-ENTERITIS (Greek *eso*, within, and *entera* the bowels). Inflammation of the mucous membrane of the *Intestines* (which see), and *Inflammation*.

ESO-GASTRITIS (Greek *eso*, and *gastro*, the stomach). Inflammation of the membrane of the *Stomach* (which see), and *Inflammation*.

ESOPHAGUS or **ŒSOPHAGUS** (Greek *oio*, or *oiso* to carry, and *phago* to eat). Literally the food-carrier, commonly called the *Gullet* (which see). This is the passage by which the food is carried from the mouth to the stomach; it is a flexuous canal or tube, extending from the throat, or fauces, to the stomach, and is narrowest at the upper end, where there is the greatest liability of a stoppage by an attempt to swallow any substance too large for the passage. See *Choking*.

The Esophagus is composed of two layers of muscular fibres, the external being placed longitudinally, and the internal disposed in circles, by the contraction and expansion of which the food is propelled downwards; the passage is lined with a layer of soft mucous membrane, and a moderately thick cuticle, which is a continuation of that of the lips and mouth. See *Alimentary Canal*, *Throat*.

ESOPHAGOTOMETRY. Is the operation of cutting into the Esophagus for the purpose of extracting any foreign body which may be lodged there.

ESSENTIAL OILS. These are oils obtained by distillation from various plants of an odoriferous nature, such as Aniseed, Anethum or Dill, Bergamot, Carraway, Pepper and Spearmint, Rose and Rosemary, &c., all of which are used medicinally; although it is the perfumers who are the largest consumers of these oils, some of which they term *Essences*, a term derived from the Latin *essentia*, whose origin is an obsolete form of the verb *esse* to be: so that the term actually means that which constitutes the being of a thing; it is therefore often applied to any strong preparation. The Essences included in the modern Pharmacopœias are those composed of 1 part of the oils above named, with some others, to 9 parts of Rectified Spirits; they are convenient for making up extemporaneous prescriptions, and for all purposes in which Aromatic waters are required; 9 drops of Essence being sufficient for one ounce of *Water* (which see), and *Agua*.

ESSERA. A name for the *Nettle Rash* (which see), and *Urticaria*.

ETHAL. A peculiar oily substance obtained from *Spermaceti* (which see).

ETHER and ETHIOPS. See *Æther* and *Æthiops*.

ETHMOID (Greek *ethmos*, a sieve, and *eidōs*, likeness). A bone of the nose perforated for the transmission of the olfactory nerves, and so called because it is cribriform, or sieve-like; the ethmoidal crest (see *Crista Galli*), is the sharp process of the ethmoid bone. See *Nose*.

EUCHLORINE. The name given by Sir Humphrey Davy to the protoxide of *Chlorine* (which see).

EUDIOMETER (Greek *eydia*, calm weather, and *metron*, a measure). An instrument used for ascertaining the quantity of oxygen in atmospheric air or any given gas; this instrument was invented by Dr. Priestley, and employed by him for ascertaining the amount of the life-sustaining principles in the air of different localities, and under different circumstances; its construction was at first extremely simple, the principle upon which its use depended being, so far as atmospheric air and oxygen gas were concerned, to expose them to the action of some substance either solid, fluid, or gaseous, which, on account of its affinity for oxygen, combines with it, and leaves the air with which it is mixed unacted upon. Various processes have been employed since Priestley's time in *Eudiometry* as it is called; but we need not describe them, as they are such as only a professional chemist could employ so as to obtain sufficiently exact results to be of any practical use. See *Atmosphere*, *Oxygen*.

EUGENIA CARYOPHYLLATA. The scientific name of the Clove tree, of the natural order *Myrtacæ*. See *Caryophyllus*, *Cloves*.

EUPATORIUM. A genus of plants belonging to the natural order *Compositæ*, and including no fewer than 294 species, among which are the following used medicinally:—*E. Cannabinum* (Hemp Agrimony) a native of Europe, and common in this country, being found mostly on the banks of streams; it was formerly much employed as a tonic and febrifuge, and is still so to some extent; the turf-diggers of Holland take an infusion of it for the ulcerated and diseased legs to which they are greatly subject; the expressed juice, when taken in large doses, excites both vomiting and purging. *E. perfoliatum* (Thorough Wort), is found in moist meadows and boggy places in North America; all parts of it are intensely bitter, and a decoction of its leaves is taken as a tonic and

stimulant; it is recommended by American physicians as a substitute for *Cinchona*, in the treatment of intermittent fevers; in



large doses the infusion or decoction of the whole plant is emetic, sudorific, and aperient. *E. Agyapama* is a native of South America, being found on the right bank of the Amazon; it has been introduced into the East Indies, and is employed as a diuretic and diaphoretic, and also as an antidote for the bites of venomous serpents and insects. Other species of the tribe possess medicinal virtues, thus *E. Aromaticum* and *E. Odoratum* have fragrant roots, and *E. Rotundifoliatum*, as well as *E. Perfoliatum* before named, have been employed in renal diseases, and in consumptions; from the *E. Cannabinum*, and some other species, an alkaloid is procured, which is called *Eupatorine*.

EUPHORBIIUM. Is a friable gum resin, being the concrete juice of the *Euphorbia Officinalis*, and other species of the natural order *Euphorbiaceæ*. According to the most recent chemical investigations, it appears to consist of resin, wax, and saline matter (mostly malates), the former being the active principle. It is a powerful, acrid substance, causing irritation and inflammation of the parts with which it comes in contact, and affecting, by sympathy, the whole nervous system. Taken in small doses, it causes vomiting and purging; in larger ones, it is likely to produce inflammation of the stomach, which may prove fatal; delirium and stupor, approaching to apoplexy, have followed the inhalation of

the dust merely. It is now little used, except externally to produce vesication; in cases of poisoning by it, after emetics or the



stomach pump, demulcent or oily fluids should be given, and venesection resorted to for the reduction of the ensuing inflammation. See *Spurge*.

EUSTACHIAN TUBE. A canal which extends from the tympanum to the pharynx, so named from its discoverer, Bartolomeo Eustachius, an Italian anatomist of the 16th century. See *Ear*, *Pharynx*.

From the same discoverer is named the *Eustachian Valve*, a fold of the lining membrane of the auricle, which in the fœtus is supposed to conduct the blood into its two different courses. See *Heart*.

EUPHRASIA OFFICINALIS (Greek *euphraino*, to gladden). The scientific name of the Euphrasy, or Eye-bright, a plant of the natural order *Scrophulariaceæ*, common in Great Britain, and formerly employed medicinally, especially in diseases of the eye; its reputation appears to rest, however, chiefly in its bright appearance, which, in times more superstitious than the present, was supposed to indicate its power of giving clearness to the sight. Culpepper says, that "if the herb was as much used as neglected, it would help to spoil the spectacle maker's trade;" and he attributes

to it the virtue of not only restoring sight decayed through age, but of helping a weak brain and memory. Of course, our readers will wish to see a cut of such a wonderful herb, and here it is; its leaves and stems are slightly aromatic and bitter; but we believe not in their medical properties.



EVACUATION (Latin *evacuo*, to empty). The discharge of the fœces, &c.

EVAPORATION (Latin *evaporo*). The transformation of a liquid into a gaseous state by the action of heat; it is by evaporation, or driving off the watery portions, that the juices or decoctions of plants are converted into extracts; and to this principle it is that spirit lotions owe their efficacy; applied to inflamed and heated surfaces of the body, they expand and fly off rapidly, leaving partial vacuums, into which fresh air enters and diffuses a refreshing coolness.

EVOLUTION SPONTANEOUS. A term applied by Dr. Denman to natural delivery, in cases in which the shoulder is so far advanced into the pelvis as to preclude the possibility of relief by operations. See *Labour*.

EXACERBATION (Latin, *exacerbo*, to exasperate.) An increase of febrile symptoms is so called. See *Fevers*.

EXANIA. (Latin, *ex* out of, and *anus*). A falling down of the anus. See *Prolapsus Ani*.

EXANTHEMATA (Latin *exantheo*, to blossom). Efflorescence; formerly understood to mean eruption generally, but now limited in

its application to superficial red patches, irregularly diffused, and terminating in cuticular exfoliation. See *Rashes*.

EXÆRESIS (Greek, *exairio*, to remove). An old term in surgery signifying a removal of diseased parts. See *Amputation*.

EXCITANTS (Latin, *excito*, to stimulate). These may be *particular* as intended to act on a certain part or organ, as diuretics on the kidneys, or *general*, as brandy or other spirit. See *Stimulants*.

Excitants may be classed under the terms of *Ordinary*, *Extraordinary*, and *Superfluous*, the first are those which serve to keep up that regular and unceasing action which is necessary to preserve a sound state of mental and physical health; among those which operate on the mind chiefly, we may mention, occupation of the mental faculties to some definite end; among those which act on the body may be named Atmospheric Air, Aliment, Electricity, Exercise involving muscular exertion, Heat and Light. Among the extraordinary excitants we have Alcoholic stimuli, with Tea, Coffee, Spices, Drugs, &c., and Atmospheric changes producing peculiar states of the air; these are physical: those of a mixed character are, the Sexual stimuli, Athletic sports and exercises, Dancing, Travelling, Witnessing exciting scenes, &c.; while those of a more purely mental character are the passions and emotions, such as Love, Joy, Hope, Fear, Music, Poetry, Political and Polemical argument, and, the most powerful of all, Religion. The classification, it will be seen is somewhat arbitrary: the influence which the mind and body mutually exercise over each other rendering it impossible for one to be unusually stimulated, without the other partaking in some measure in its excitement. As more will be said on the various stimuli above named under their several heads, we shall here press upon our reader's attention, the importance of obtaining regularly those excitants which are necessary to a proper state of mental and bodily health; of partaking in moderation of those which are, and ought to be, but occasional and extraordinary; and of avoiding as much as possible those which are altogether superfluous, and therefore mischievous.

EXCITATION. Is the term expressive of an action by which the vital functions are stimulated to an increased performance of their duties; it is synonymous with *Stimulation* (which see).

EXCITING CAUSES of disease are so various in their character and modes of action that we cannot here particularise or describe

them; among them may be named Contagion, Infection, Atmospheric states or Climates, Food, Drink, Imperfect clothing, Uncleanly and vicious habits, occupations and modes of life; for farther particulars of all of which see the several heads.

EXCRETIONS. These are the fluids which are no longer serviceable to the body, and are therefore rejected by means of the proper organs; they must not be confounded with the *Secretions* (which see), such as the Milk or Gastric Juice, Salivary or Pancreatic fluids, nor even the Bile, which, although poisonous in a high degree when retained in the blood, is yet, when secreted and mixed with the food in the alimentary canals, very serviceable in stimulating the digestive powers to a proper performance of their work.

We may briefly point out the difference between *secretion* and *excretion* as thus: The former is the process of formation of peculiar fluids from the blood, of which the elements only exist there, and which are intended to answer some useful purpose in the animal economy; while the latter is the process of abstracting from the blood matters which do already exist there, and which, if suffered to remain, would become poisonous.

Of Excretions, the urine is perhaps the best example that could be adduced, consisting as it does of water, holding in solution mineral salts, and various substances, which have been reduced to elementary forms by yielding up the nutritive or otherwise useful principles, which held them in combination. Here we find *urea*, a narcotic poison, which if, from disease of the kidneys or other cause, it is retained in the blood, inevitably causes death. The excrements voided from the bowels, again, are matters which cannot be retained there without great danger; and the perspiration, if it be not allowed to escape through the pores of the skin, will be sure to occasion some inflammatory or other disease.

From all this we should learn how important it is to the health of the body that the *Excretory organs* should be kept in a proper state, so that their regular operations be in no wise interfered with.

EXCRETORY DUCT. Is any duct or passage which leads from a gland, such as the hepatic and parotid, and afford a channel for the escape of an *Excretion*.

EXCORIATION (Latin *excorio* to take off the skin). See *Abrasion*.

EXCREMENT (Latin *excrementum* from *excerno*, to separate from). The alvine *fæces* or *excretion*: this is a general term for

any ejection of animal matter, such as the *Fæces, Perspiration, Urine*, (which see).

EXCRESCENCE (Latin *exeresco*, to grow from). A useless protuberance, an unnatural and morbid growth, applied in Surgery to *Warts, Wens, &c.*, (which see).

EXERCISE. We have already spoken of this as one of the most important excitants or stimulants by which bodily health is preserved; it may be briefly distinguished as spontaneous muscular movement, by which a stimulus is given to the system generally, and to each of the vital processes particularly. A certain amount of exercise is absolutely necessary to keep the machinery of life in proper working order; true, some persons do manage to live with very little of it indeed, but they are generally miserable creatures without heart, hope, or energy; or, if they enjoy their existence, their enjoyment is like that of the well-fed swine, their pleasures are merely animal, and if they do not die suddenly of apoplexy or some similar disease, they linger on in a plethoric state, with disordered functions and diseased organs, which by and by refuse to work at all, and so death ensues. Exercise taken with moderation and regularity is undoubtedly the grand panacea of health, and the goodness of God may be noted in the fact, that he has rendered it absolutely necessary for the great majority of mankind to take sufficient of it in the very act of obtaining the other necessities of existence. Look at a man engaged day after day in active bodily exercise; what a development is there in his whole frame of muscular power! how his energies, both mental and bodily, are stimulated and brought into play: obedient to the promptings of his will, his nervous system is aroused, his muscles are called into action, they send the blood more quickly through the veins, and there must be accelerated action of the heart to sustain the demand for a quicker supply of the vital fluid, which also passes more rapidly to the lungs to throw off its load of carbon, and become purified by contact with the oxygen of the atmosphere; to effect and preserve the balance of the circulation, the play of the lungs must also be more free and rapid; the worker draws a deeper breath, and makes more frequent inspirations than the looker-on: the work of secretion, digestion, and excretion all go on more quickly with the active than the inactive man; he requires more nourishing food and drink (it should be unstimulating) to supply the waste which is going on in his system, and to keep in repair the ever-wearing structures of the

body; and this is the proper condition of a truly healthful existence. "Better rub than rust" may be said of the body as well as the mind; the Almighty has so ordered it that the physical waste resulting from regular daily toil, shall be constantly supplied by the stimulus given to the organs of nutrition, and that the life of the toiler shall be the healthfulest and happiest state of human existence; we speak of him, of course, as one having inherited a sound vigorous constitution which he has not abused by intemperance or other sensual indulgences. Such, then, being the case we would say to all who are not obliged to work for a livelihood—for to those who are we need not say it—take plenty of exercise, and take it not by fits and starts, a great deal now, and then none at all; but take it regularly as you would your food or sleep, or any other constantly-occurring want of daily life; walk or ride in the open air every day, and if possible have some object in view so that the mind may be exercised as well as the body; be a botanist, or an entomologist, or what you will, but have some pursuit that may take you abroad, and that frequently, to exercise your muscular powers and inhale the pure fresh air of the country. But many there are who cannot avail themselves of this recommendation, whose duties and avocations confine them to shops, and warehouses, and counting-houses, or to the walls of their habitations, and to such we would offer a few words of advice as to the exercise which they may and ought to take.

For those who are in full possession of health, and desire to retain it, there is undoubtedly no exercise so good as walking, and no time equal to the early part of the day; nevertheless, it is not well to walk far upon what is popularly called "an empty stomach." One who walks before breakfast should always take a crust of bread or a biscuit before he sets out, and he may then walk briskly for two or three hours before he feels the want of the more solid meal; hungry he no doubt will, and ought, to be; but he will not experience that sense of sinking and exhaustion which he would be likely to, if he took nothing at the outset. As to the *pace* and *distance*, the physical powers and habits of each walker must guide him entirely; what would be but healthful exercise to one, would to another, be over exertion. Next to the morning, the evening is the best time for walking for those persons who do not take late and luxurious dinners; for the adage still holds good—

"After dinner sit awhile;"

Although we scarcely think that the accompanying line of the distich contains such salutary advice:—

“After supper walk a mile.”

That is if the supper be made a heavy meal, as it never ought to be, for immediately after such, active exercise is injurious; in this case also it should be “sit awhile.” See *Meals*.

These remarks refer chiefly to the warmer portion of the year, when it is very unadvisable to take open air exercise, except in the morning before nine or ten o'clock, and evening after five or six. In the winter, the middle of the day is the best time for walking; but then the dinner should be late, and rest directly the walk is over, unless it has been a very gentle one. It is in walking that the greatest number of the muscles are called into play, and the whole of the bodily frame gets most exercised; in this way, too, the course may be shaped more in accordance with the wishes of the mind, which is thus more completely aroused and animated; and this, too, is one of the essentials of true healthful exercise. We have already spoken (see *Early Rising*) of the desirability of the walker having some object in view, some pursuit to occupy his mind, having reference to the beauties and wonders of external nature. Questions of abstruse science, business speculations, and the like, should not be allowed to occupy the mind when the body is taking exercise; for the senses require this as well as the muscles, &c., and they, it is likely in such a case, would be to a great extent unobservant, and might almost as well be sleeping. Riding on horseback is the next best exercise to walking, it is healthful and invigorating, and inspiring; a greater distance may in this way be accomplished, and the mind, through the eye, luxuriates in a greater diversity of scenery; but it does not bring so many of the muscles into play, and is, therefore, scarcely so beneficial to the general bodily health, with which the vigour of the mind is intimately associated; the equestrian it is true, has some advantages over the pedestrian in a hygienic point of view, but we agree that the great balance lies with the latter.

Carriage exercise, for those whose habits of life and infirmities would render either of the above usual modes injudicious, if not impossible, is certainly good; the breathing of the fresh air and excitement of mind which it involves are salutary; and even the poor invalid, who cannot bear his carriage windows opened lest the breath of heaven should visit his face too roughly, may de-

rive benefit from the gentle motion and glimpses from the world of beauty without, giving as much stimulus to his mind and body as they will probably bear.

As for children, as soon their legs are strong enough to bear them, by all means let them walk, and run, and play all sorts of antics, as the young lambs do. Nurses' arms, perambulators, and other juvenile carriages are all very well for the weakly and sickly; and these, in suitable weather, should have plenty of open-air exercise, but not as we have seen them, with heads hanging down and eyes closed, joggling about with every shake of the vehicle, or false step of Lucy's, who is often too busily engaged in her own love, or other affairs, to attend much to her charge. A child should never sleep in the open air, but be talked to and amused, and kept awake as long as possible, and brought in when it cannot longer keep awake. Hence, either in the arms or some vehicle, unless closed, long rides are not good for young children, as they soon become sleepy when exposed to the air, and it is best to have them out and in frequently. But, this being the most troublesome course, mothers often send them out for the whole morning or afternoon; although, in only a few cases, where servants are really trustworthy, can they tell how they will be treated, or where they will go to. A friend of ours, a medical practitioner, was much horrified one day while driving through a village near the town where he resided, to see his nursery maid in a round-a-bout, with his child in her arms, twirling away merrily; she had been sent out for a long walk, and stayed to participate in the pleasures of fair-time. Let mothers think of this, and wonder not that their infants are sometimes suddenly seized with fever, or some other contagious or infectious disease, after their long rides with nurse; *they cannot tell where they go to*.

Of the sports and pastimes common to children and adults, we have little space, and, withal, little occasion to speak; if enjoyed at proper times, and in moderation, they are, generally speaking, highly salutary, although much mischief often arises from an excessive indulgence in them. Play is a necessity of juvenile existence, and, to some extent, of adult life also. Play is exercise, and the man or woman who never plays—we do not mean whist or billiards, nor any game of that kind—is not only a morose misanthropic being, but most likely a very unhealthy, as well as unhappy one. Then too, there is exercise for the mind—for the thinking and reasoning faculties, with-

out reference to the bodily powers, on which a few words ought to be said. When severe, as in obstruse studies, or the continued call upon the brain which a literary life necessitates, it is real hard labour—more wearing to both body and mind than that of the stone-breaker on the road; when light it is play, and both are requisite to mental health, only let them be duly proportioned. The man who is always playing is a fool; he who is always working is a self-destroyer; often, alas! an enforced one.

There is one branch of our subject to which we have not alluded, because we were anxious to get the other part disposed of, and be free to give it that full and considerate treatment which its importance demands. We allude to those home and school exercises which its advocates and professors, in accordance with the present rage for long name with Greek roots, have agreed to call *Calisthenics*, which is defined to mean, “exercises for health, strength, or elegance.” We find this subject so well treated in a valuable repertory of information, called “Facts for Everybody,” that, with permission, we quote the article verbatim:—

Use of Calisthenics. It is an admitted physiological fact, that imperfections in the female form originate, for the most part, in defective or irregular muscular action. The calisthenic exercises are calculated to cure deformities of the figure, especially of the chest, to invigorate the system, and conduce to elegant deportment and symmetry of form.

Preliminary Cautions. 1st, that they should not be performed after a full meal; 2nd, that there should not be any ligatures or tight strings, straps, &c., on any part of the body, but that the clothes should fit easily and loosely; 3rd, that the body should not be too warmly clothed during the exercises, but that an additional wrapper should be provided, to cover the body as soon as they are finished; by this means cold will be avoided; 4th, that the exercises should generally be performed in a room, in preference to the open air; 5th, that due regard must be paid to the health, age, and strength of the pupils exercised.

Necessary Apparatus. The first thing to be attended to are the cautions we have given above; and then the necessary apparatus, consisting of dumb-bells, back-board, clubs, wands or poles, triangles, and elastic-cord, must be procured.

The Dumb Bells we advise are constructed as follows. To the staff *a* (which is made of oak or ash, six inches long, and one and

a quarter inches in diameter), is fixed a hemisphere (*b*), with a male screw (*e*); and to this part is attached at both ends another hemisphere (*c*), fitted with a female screw, so that when these hemispheres are screwed together they form a complete sphere as represented by *d* in fig. 1.

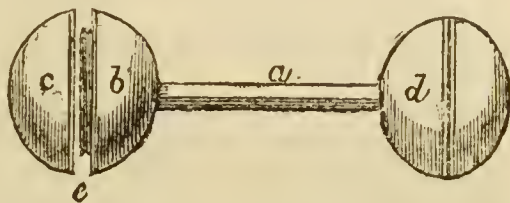


Fig. 1.

By putting lead, or some other weighty material into these spheres, the weight of the instruments can be increased in proportion to the strength of the person using them.

Back Boards should be fitted to the person requiring them, unless they are used for the back-board exercise, in which case they will be as represented in fig. 2. When

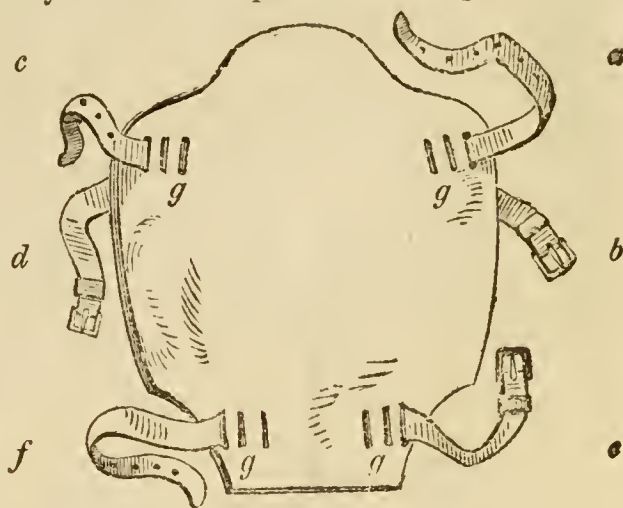


Fig. 2.

not used for this exercise, they are fastened to the back and shoulders by means of straps (*a*, *b*, *c*, *d*) which pass round the shoulders and are made to buckle in front. These straps can be lengthened or shortened by passing them through holes in the board (*g*, *g*, *g*, *g*), left for that purpose. The lower part of the board is fastened round the waist by a strap (*e* *f*), which buckles in front.

The dimensions of the short back-board are as follow, for a large size: length twelve or thirteen inches, breadth ten inches, lower part five inches, and upper part four inches. These measurements can be reduced according to circumstances, age, &c.

The Long Back Board should be broad in the centre, as in fig. 3, so that the flat part may reach across the back of the shoulders.

and the handles (*a b*) be long enough to hold in the hands when the arms are extended. Some of these back-boards vary



Fig. 3.

from six feet in length to only three feet eight inches.

The Clubs for calisthenics should be made hollow, as in the annexed figure (fig. 4)



Fig. 4.

requiring them.

The Triangle is a bar of wood attached to a cord at each end; the two cords meet above, as shown in fig. 5, so as to form two

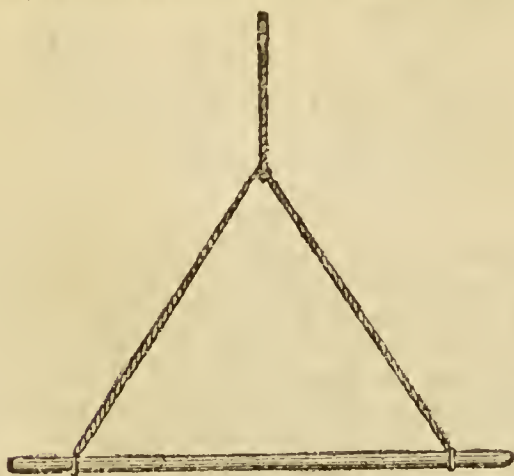


Fig. 5.

sides of a triangle, of which the bar forms the third. A cord is attached to the upper part of the triangle, and this, passing over a pulley, enables the teacher to lower or raise the bar so as to suit the height of the pupil.

The Elastic Cord, fig. 6, is one of the latest improvements in calisthenic exercises. It consists of two handles (*a b*), of a triangular form, to which is attached an elastic cord, made of vulcanized india-rubber.

They may be obtained at most toy-shops, and vary in price from two to five shillings, according to the size.

The pupil should commence the exercises

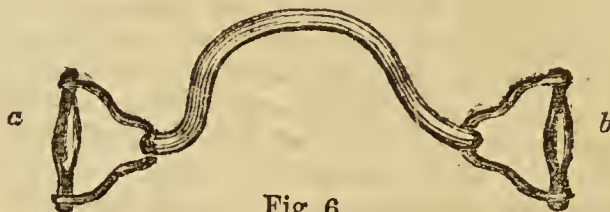


Fig. 6.

with *The Dumb Bell Practice*. The dumb-bells are not to be used at first; but when the pupil has become proficient in the following exercises, then the dumb-bells are to be held firmly in the hands, which are to perform the same motions directed below.

Position of Attention. When the word attention is given by the teacher, the pupil is to draw back the shoulders, so as to make them square; the heels are to be placed in a line, and closed; the knees straight, the toes turned out an angle of 60 degrees, the arms hanging close to the body, the elbows turned in close to the side, the hands open to the front, the little finger lightly touching the dress, and the thumb close to the forefinger. The abdomen is to be slightly drawn in, and the chest advanced, but without constraint; the body upright, inclining a little forward, so that the weight of it may be principally on the fore-part of the feet; the head erect, and the eyes looking straight to the front, as in fig. 7.



Fig. 7.



Fig. 8.

First Practice. One.—At the word *one*, raise the hands and bring the tips of the fingers in a line with, and pointing towards the shoulders, the body inclining forward, the head erect, and shoulders kept well back, with the elbows close to the side, as in fig. 8.



Fig. 9.

straight arms in a line with the shoulders, the palms of the hands to the front, the thumbs close to the fore-fingers, the head erect, and shoulders kept well back, the body inclining forward, the heels raised off the ground, so that the weight of the body rests on the fore-part of the feet, as in fig. 10.



Fig. 10.

These motions are to be repeated from *three* to *two*, and from *two* to *three* several times before commencing *four*.

Four.—The arms are to be brought gradually by the side to the first position, (fig. 7).

Second Practice. One.—The hands are to be brought smartly up with the palms of the hands to the front, the tips of the fingers in a line with the shoulder, pointing upwards, the elbows to be kept close to the side and well back, so as to square the shoulders; the head is to be held erect, and the body slightly inclined forward, as in fig. 11.

Two.—Raise the elbows a little so as to draw them upwards and backwards; then bring the hands smartly down to the side.

as in fig. 12, and assume the position of attention, fig. 7).



Fig. 11.



Fig. 12.

Long Back-board Exercises. The long back-boards (fig. 3), are to be held by the handle with the left hand, and the right hand is to be placed on the top of the back-board, while the other end rests upon the ground between the feet, as in fig. 13.

Attention. When this word is given the heels are to be brought in a line, and the back-board brought across in front of the thighs at the full extent of the arms, holding it by the handles with both hands (the backs of the hands to the front), as in fig. 14.

One.—The back-board is to be gradually raised from the position of *attention*, with the arms straight, until the flat part of it is horizontal and over the head, the tips of the fingers in front, and the knuckles



Fig. 13.



Fig. 14.

behind; the body is to be kept well forward on the fore-part of the feet, and the head erect, as will be seen in fig 15.

Two.—At this word the back-board is to be lowered from position *one* (the arms being contracted), and it is to be brought

across the back part of the shoulders (as in fig. 16), still keeping the body well forward, and the head erect.



Fig. 15.



Fig. 16.

In the last position, the pupil will then be required to walk slowly round the room, quickly, and to practise the balance step without gaining ground.

When the various exercises have been frequently repeated, the word "steady" will be given, when the position of attention (fig. 14) is to be resumed, and at the command "stand at ease," that position (fig. 13), with the back-board, is at once to be taken.

The use of the Broad Backboard; of the Clubs for swinging the arms; of the Wands or Poles for leaping; of the Triangle and the Elastic Cord, will be sufficiently obvious. There are also other.



In-door Exercises. Females much confined to the house, who suffer ill health in consequence, will do well to avail themselves of such as the skipping-rope, battle-dore and shuttle cock, &c., all aids to the required end. Dancing is one of the best preservatives of health, when enjoyed at proper hours, and not carried to excess. But this exercise can only be obtained upon particular occasions, when there are many to share it,

and glad music contributes to heighten the enjoyment. Really the best indoor exercise for developing a graceful bearing, and for diffusing its healthful influence over the whole frame, is that of throwing balls dexterously, according to any of the contrivances of fancy. Persons who become expert in this practice may throw from one to eight balls with astonishing dexterity, the exercise being sufficiently stimulating to encourage its frequent repetition; quickening the eye, and imparting a healthful vigour to every muscle of the system. A few neat leather balls are all that are required, and a room of moderate size will afford sufficient space. Dumb-bells are somewhat cumbrous and inelegant.

EXFETATION (Latin *ex* and *fœtus*). Extra-uterine fœtation, or imperfect fœtation in some organ without the uterus. See *Eccyesis*.

EXFOLIATION (Latin *exfolio*, to cast the leaf). The separation of a piece of dead bone from the living substance; this is the result of disease: the thin leaf-like scales, or plates, in which the pieces of bone come away, have given occasion for the above name. See *Bone*.

EXHALATIONS (Latin *exhalo*, to exhale or fly off). The vapour which arises from animal and vegetable bodies, marshy places, &c. Applied to the living body, it means the evaporation of a fluid through a membrane, as the lungs and skin; the former of which is computed to exhale in the course of 24 hours, from 16 to 20 ounces of fluid in the form of vapour. From the skin, an exhalation of watery fluid is also constantly going on in the form of what is called *insensible* perspiration; it is called *sensible* or felt, when a much greater quantity than usual passes through the pores, and is condensed on the surface. See *Perspiration*, *Respiration*, *Skin*.

EXHAUSTION. This is the state which naturally follows exertion; it may be either of the body generally, or of one or more of its organs, and it is more or less complete in proportion to the violence of the exercise which produces it, and of the bodily strength of the exerciser. It is the effect of failure of nervous energy, or of deficiency of organized materials fitted to support the requirements of the body. This latter is especially the case in the exhaustion of those debilitated by disease, or want of food or drink, or exposure to intense cold. Under the effects of passion, or excitement of any kind, persons will perform feats of strength, and completely use up, if we may so speak, their nervous energy, without

being aware of it, until the stimulus is withdrawn, when they sink exhausted, and are quite incapable of further exertion until rest and nutriment have recruited their powers; and from such *occasional* exhaustions no serious mischief may accrue. But when the daily labours of life are such as produce them, it is plain that nature will in time rebel against such excessive task-work, and there will be organic disease and a debilitated state of the system which will render it impossible. It is the truest policy, therefore, not to overtask either the bodily or the mental powers; for the same results will follow a continued undue exercise of the mind also; for the mental faculties act by means of bodily organs, and the waste of physical energy is almost as great when a man thinks long and intensely, as when he strains his nerves and sinews in some laborious occupation. We would, therefore, simply warn our readers against habits and modes of life which necessitate either physical or mental exhaustion; too much stimulus of any kind leads to this, intemperate indulgence in the pleasures of sensuality, as well as in the enjoyments of intellect, or the toils of daily life. Let us not exhaust ourselves at all if we can help it; but certainly let us not do so in pandering to vicious and depraved appetites.

EXEMPHALOS (Greek *ex* out, and *emphalos* umbilicus). Rupture at or near the umbilicus. See *Hernia*.

EXOPHTHALMIA (Greek *ex* out, and *ophthalmos* the eye). A swelling of the bulb of the eye, sometimes called *Ophthalmoptosis*, and sometimes *Ptosia bulbi oculi*. See *Eye*.

EXORMIA (Greek *ex* and *orme* impetuous). An old medical term synonymous with *Ecthyma* (which see).

EXOSMOSIS (Greek *ex* and *osmon* impulsion). The property by which rarer fluids pass through membranous substances out of a cavity into a denser fluid: this is sometimes called *Dehors impulsion*; compare *Endosmosis*.

EXOSTOSIS (Greek *ex*, and *osteon* a bone). An excrescence or morbid enlargement of a bone. Sir A. Cooper states that the disease may be an osseous deposit between the external surface of the bone and the internal surface of the *periosteum*, firmly adherent to both, in which case it is called *Periosteal*: or a similar formation originating in the medullary membrane, and cancellated structure of the bone, and hence termed *Medullary*. Then, too, this morbid growth may be either *Cartilaginous* or *Fungous*, according to its method of formation. See *Bone*.

EXPECTORANTS (Latin *expectore*, from, or

out of, the breast). These are medicines for promoting the discharge of mucous or other matters from the trachea and its branches. *Expectorant Medicines* may generally be arranged under the following heads:—*Nauseating*, as Ammoniacum, Garlic, and Squill, which are most suitable for the aged and phlegmatic; *Stimulating*, as Horehound, which is best adapted for the young and irritable; *Antispasmodic*, as blistering substances, hot fomentations, footbaths, &c., most suitable for the plethoric and irritable, and those liable to spasmodic affections; *Irritating*, as fumes of Tobacco and acrid vapours, adapted for those past the period of growth, and those who have evident marks of torpor, in the lungs in particular, or in the system generally. As Expectorant medicines we chiefly use Ammoniacum Gum, dose, 10 to 30 grains; Antimony, various preparations, but chiefly the Wine, dose, 5 to 10 minims, with other medicines; Balsam of Tolu, 5 to 10 drops on sugar; Benzoin, Compound Tincture, about $\frac{1}{2}$ a-drachm; Colchicum, Wine and Vinegar, dose 10 to 30 drops; Coltsfoot and Dulcamara, Decoction, 1 drachm to an ounce; Digitalis, Tincture, 20 minims. A two-fold action may be traced in these remedies: first they remove the constriction of the vessels by the relaxation caused by the nausea they excite; and by their stimulating after-action they restore the natural secretions, and so change an unhealthy for a healthy condition of the vessels.

The following formula of Expectorant Medicines may be recommended as safe and efficacious; for Mixture, take of Ipecacuanha Wine, 2 drachms, Syrup of Tolu, 4 drachms; Compound Tragacanth Powder, 2 drachms; Water sufficient to make 6 ounces: for a child, 1, for a grown person, 2 table-spoonsful every four hours; in the latter case, 2 drachms of Compound Tincture of Camphor may be added to the Mixture, and 2 drachms of Vinegar of Squills if the expectoration is difficult. For Pills, take Compound Squill Pill, and Compound Ipecacuanha Powder, of each, 1 drachm; mix, and make into 24 pills; one every four or six hours. For an Electuary, rub down Spemaceti, 1 ounce, with a few drops of Spirits of Wine; mix with an equal quantity of Powdered Gum Acacia; then add common Vinegar, and Syrup of Poppies, and Almond Oil, of each, $\frac{1}{2}$ ounce; put the whole into a gallipot, and give a teaspoonful when the cough is troublesome; excellent for children, who will commonly take it eagerly on account of its sweetness.

EXPECTORATION, Is, first, the act of dis-

charging mucous or other matter from the lungs or trachea; and second, the substances so discharged. The term in its first meaning is synonymous with coughing, and need not further occupy our attention; but in its second, we find so many important considerations connected with the diagnosis of disease, that we must pause awhile to consider it. It is by the nature of the Expectoration that the physician is enabled to judge of the character and progress of the malady with which he has to contend, if this be *frothy* it indicates active Bronchitis, Catarrh, or Influenza; if *stringy*, and of a whitish or yellowish colour, the Bronchitis has become chronic, or spasmodic, or there may be Hooping-cough present or impending; if *purulent*, it may indicate the latter stages of Catarrh, or Influenza, especially if the sputa, or matter spat up, is mixed more or less with a tenacious mucus; genuine *pus*, capable of being poured from one vessel to another, indicates the bursting of a vomica on the lungs, or of the matter of the empyema having found its way into the bronchial passages; the yellow matter often expectorated in humeral asthma is not truly purulent, but to a large extent mucous. If *lumpy* there can be no mistake as to the nature of the disease; Pulmonary Consumption has fairly set in, and made considerable advances; there is sure to be a softening and breaking up of tubercles, where there are small yellowish or whitish lumps expectorated along with the clearer fluid on which they float, perfectly distinct. If *membranous*, the sputa indicates inflammatory action of a chronic, most likely of a croupy character. If *stringy* and *rusty-coloured*, there is certainly Pneumonia; if *bloody*, there is Hemoptysis, either a blood vessel on the lungs has broken, or blood has oozed through the bronchial membrane, both symptoms of a very diseased state of the tissues, and indicative of great danger to the patient. If *offensive* and *putrid*, there may be gangrene of the lungs, but this is only a single sign, and not to be relied on alone. These are the chief distinctive characters which Expectoration assumes, and its increase or decrease in bulk or density, its varieties of tint and other particular changes, tell to the experienced eye of the doctor how the case progresses, and whether it is likely to terminate in convalescence or death.

EXPIRATION (Latin *expiro* to breathe). The act of expelling the air from the lungs. See *Breathing*, *Respiration*.

EXPLORATION (Latin *exploro* to examine). Examination of the abdomen, chest, &c., with a view to ascertain the physical signs

of disease, which, in this case, are not termed *symptoms*. This process may be conducted in different ways—for instance: the methods of exploring the abdomen are 1st, by *Inspection*, or ocular examination, by which size, form, and movements can be observed; 2d, by *Feeling*, or manual examination, used for ascertaining the degree of sensibility, the existence of a tumour; 3rd, *Percussion*, used for detecting the fluctuation, quantity, condition of the fluids within. (See *Auscultation*). A process for ascertaining the comparative size of the different parts of the chest is sometimes resorted to, and this we call *Mensuration*. The old physicians used, at times, to shake their patients' bodies, and note the sounds thereby produced, and this was termed *Succession*; but it is not practised now.

EXPRESSED OILS. Are those which are obtained from bodies by means of pressure; such as Castor and Linseed, and some other Oils used medicinally, although the chief of these thus employed are *Essential Oils*, (which see).

EXSANGUINITY (Latin *ex* and, *sanguis* blood). A state in which there is a deficiency of blood. See *Anæmia*.

EXTENSION (Latin *extendo*, to stretch out). The process resorted to in reducing *Dislocations*, (which see), and *Fractures*.

EXTENSOR (same root). A term applied to a muscle which extends any part; its opposite is *Flexor*, (which see).

EXTIRPATION (Latin *extirpo*, to eradicate). When used in surgery, signifies the removal of any part by the knife or ligature.

EXTRACT (Latin *extraho*, to draw out). A form of preparation much employed in medical practice, the consistence varying from that of treacle to that of a solid pill mass. They are procured by the evaporation of watery or spirituous solutions of vegetables, and of the native juices obtained from fresh plants by expression. The London College arranges its Extracts in three divisions; 1st, we have *Watery* or *Simple*, including those of Aloes, Bark, Camomile, Colocynth, Dandelion, Gentian, Hops, Liquorice, Logwood, Opium, Poppies, Sarsaparilla, Stramonium; 2nd, *Spirituous* or *Resinous*. The strength of these depends greatly upon that of the spirit employed as the solvent; they contain all the ingredients of the watery extracts, except the gum; the chief of them are of Bark (resinous), of Colocynth (compound), of Jalap, and of Rhubarb; 3d, *Inspissated Juices*. These are obtained by expressing the juices of the fresh plants, and evapo-

rating them in a hot bath, or in *vacuo*, as it is called, that is in space exhausted by an air pump; those chiefly used are of Aconite, Belladonna, Conium, Elaterum, Henbane, and Lettuce; these are nearly all narcotic preparations, and one curious fact respecting them is, that they contain a small proportion of mineral salt, such as Nitre, Muriate of Soda, and Potash. In order to give them a smooth and glossy appearance, manufacturers generally add to every pound about $\frac{1}{2}$ a drachm of Gum, 1 drachm of Olive Oil, and 20 drops of Rectified Spirit. Simple Extracts should be used as fresh as possible; the Resinous will keep a long time good, but the other do not, unless carefully excluded from the air.

EXTRACTION (same root as the last). The operation of drawing *Teeth*, (which see), of removing a musket-ball, or any extraneous substance which has made its way into the body. With the more formidable of these operations of course the nurse or mother can have nothing to do; but the extraction of a thorn or a splinter, a pin or needle, or even a fish or crotchet hook, may be accomplished with a little careful manipulation: in the case of a thorn or splinter, its position may generally be ascertained by the black line which it shows through the skin, and the end may be taken hold of with the point of a sharp needle, if it does not project sufficiently to be drawn out with a pair of tweezers; if this cannot be accomplished, a warm poultice will sometimes effect the object, if not, a small abscess will quickly form, and the offending object will most likely come out with the discharge. A needle or a headless pin is more difficult of extraction, if it should have worked its way quite in; if its position can be traced near the surface, it may be worth while to make a clean cut with a lancet along the line indicated, and to take it out, otherwise it must be left to work its way out, which it will by-and-bye do, probably at some quite unexpected part. A fish or crotchet-hook is a difficult object to extract, on account of the barb; in most cases the shank will be left to take hold of, and by working this carefully about for a little time the object may be effected; if not a cut must be made quite down to the barbed part of the hook, it can then be easily extracted; if the shank should be broken off the operation is rendered more difficult, and a surgeon had better be called in. The part from which any foreign object has been extracted is generally sore and inflamed; it should be rubbed with a little Olive Oil, and then have rags wet with Cold Water kept

applied to it for some time; this with quiet, and perhaps a little gentle aperient, will generally set the patient right.

EXTRAVASATION (Latin *extra*, out of, and *vas*, a vessel). The passage or escape of fluids out of their proper vessels or channels; thus, Extravasation of Blood, is the pouring out of that fluid from the vein or artery into the cellular membrane, as is the case in a contusion, when there is generally discoloration of the surrounding parts; as is the case also in Pulmonary Apoplexy, in consequence of the rupture of one or more of the vessels of the lungs; and in Cerebral Apoplexy, caused by an outflowing from the vessels of the brain, which may be the result of accident or disease. See *Brain*, *Bruises*, *Pneumonia*, &c.

EXTROPIMUM. Same as *Ectropium*, (which see) and *Eye*.

EXUDATION (Latin *exudo*, to flow). The flow of liquid from the surface of the skin, or membrane, as an ulcer, &c.

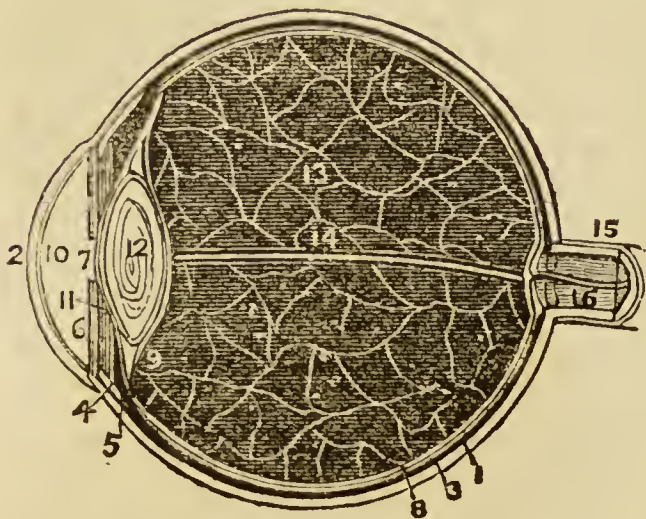
EYE. Few persons are aware how marvellously beautiful and complex a structure is the organ of vision; and it is somewhat difficult, within the limited space which we can give to the subject, for us to explain its various peculiarities of structure, so fully and clearly as that our readers may have a correct understanding thereof. Volumes have been devoted to a subject which we must compress into a few pages; and therefore, without pausing to speak of the many poetical things which have been said of the Eye, such as its being "the window of the soul," "the light of the body," "the queen of the senses," and so forth, we will at once proceed to our attempted description, in which we shall be greatly assisted by the excellent diagrams with which our artist has furnished us. We will speak, first, of the Eyeball, the optical instrument, independent of the muscles by which its various movements, and those of the lids, are affected; of the bony cavity, or orbit in which it is lodged and protected; and of the lachrymal apparatus by which it is provided with the fluids necessary for its lubrication.

The Eyeball, then, is a hollow globe, or small spherical chamber about 1 inch in diameter, having the segment of a smaller sphere engrafted on its front surface; this is what we see projecting like a bow window, as it were, when we take a side view of the face; it is, in fact, the window of the chamber, and through it pass the rays of light which paint pictures on the retina within, of outward scenes and objects. **L**

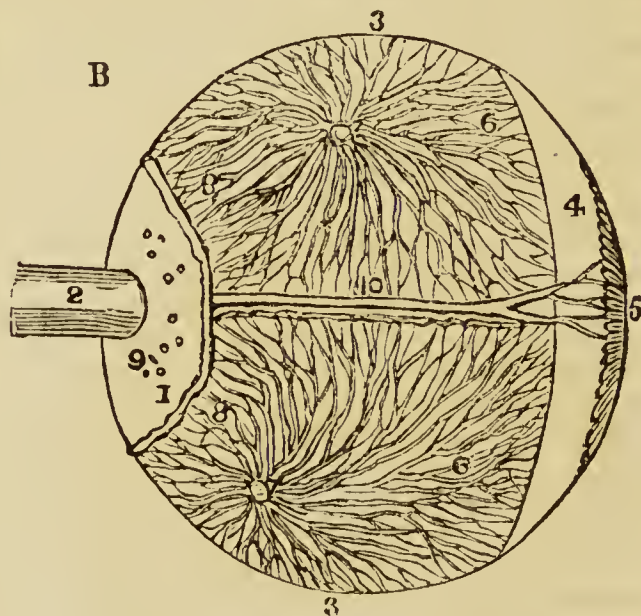
diagram A. which represents a longitudinal section of the Globe of the Eye, this projection is very distinctly marked, giving to the sphere a frontal elongation. This globe is composed of investing *tunics*, three in

chamber; 12 the *lens*, more convex behind than before, and enclosed in its proper capsule; 13 marks the inner area of the globe, filled with a thin membrane called the *hyaloid*, and containing the vitreous humour; 14 is the tubular sheath of the membrane, through which passes an artery connected with the capsule of the lens, and at the back of the eye, with the optic nerve, as represented at 16. Of this nerve, 15 marks the *neurileuma*, or sheath.

We will now proceed more into detail, in explanation of diagram B, which repre-



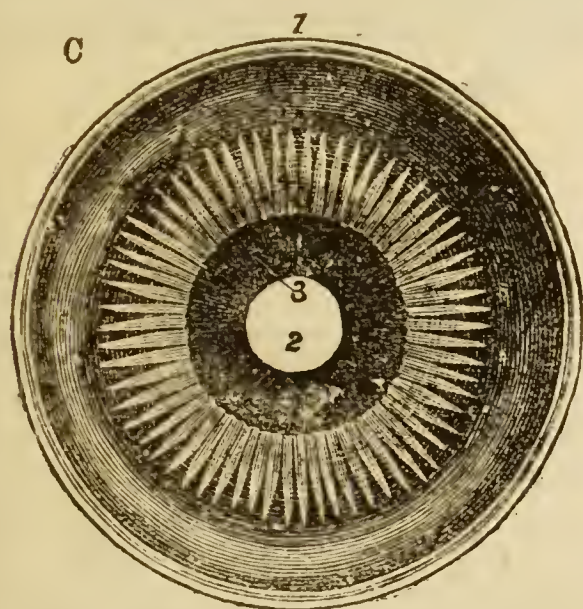
number, and of refracting media, called *humours*, of which there are also three. The lines encircling this globe represent the tunics by which the humours are kept in their proper place. No. 1 marks the course of the outer tunic called the *sclerotic*, which invests four-fifths of the globe, and gives it its peculiar form; it is a dense fibrous membrane, thicker behind than in front, where it presents a bevelled edge, into which fits like a watch-glass the *cornea* (2), which invests the projecting portion of the globe, and is composed of four layers, viz., the *conjunctiva*, or *cornea propria*, consisting of thin lamellæ, or scales, connected by an extremely fine arcular tissue; the *cornea elastica*—an elastic and excessively transparent membrane, which lines the inner surface of the last; and the *lining membranè* of this front vestibule, or bay window of the Eyeball, whose second tunic is formed by the *choroid* (3), represented by the dark line; the *ciliary ligament* (4), which develops from its inner surface the *ciliary processes*, and the *iris* (6), of which the opening at No. 7 represents the *pupil*. We shall go more into details presently as to the nature of these several constituents of the tunics and other parts of the Eye; at present we will keep to general outlines as represented in the diagram A. The third tunic, then, is the *retina* (8), which is carried forward to the *lens* (12), by the *zonula ciliaris*, a prolongation of its vascular layers passing along the front of the *Canal of Petit* (9), which entirely surrounds the lens. In the space marked 10, is contained the *aqueous humour*; 11 is the *posterior*



sents the Eyeball divested of its first tunic, so as to exhibit the second, with the beautiful distribution of the veins of the choroid called *venæ vorticosæ*, from the peculiar manner of their arrangement; this is the external layer of the choroid, which is connected with the ciliary ligament; next to it comes the *middle* or *arterial layer*, composed chiefly of the ramifications of minute arteries; it is called the *tunica Ruyschiana*, and is reflected towards its junction with the ciliary ligament, where it forms what are called the ciliary processes already spoken of. The internal layer of this tunic is called the *membrano pigmenti*, which is composed of several laminae of minute six-sided cells, which are arranged like a tessellated pavement, and contain granules of *pigmentum nigra*, or black paint; this is not, however, quite black, but of a deep chocolate colour. In diagram A, we see it in the dark line which encircles the globe, and thickens considerably towards the front. At the space marked 1, in diagram B, is part of the outer tunic, the *sclerotic*; 2 is the optic nerve communicating with the ball at the back; 3 3, distinguish the outline of the choroid coat; 4 is the ciliary ligament, a dense white

structure, which surrounds, like a broad ring, the circumference of the iris (5). This ligament serves as a bond of union between the external and middle tunics of the Eye-ball, and serves to connect the cornea and sclerotica at their lines of junction with the iris and external layer of the choroid, 6 6, mark the *venæ vorticosæ*; and 7 7, the trunks of these veins at the point where they have pierced the sclerotica; 8 8, are the posterior ciliary veins, which enter the Eye-ball in company with the posterior ciliary arteries, by piercing the sclerotica at 9; the course of one of the long ciliary nerves, accompanied by a vein, is marked by 10.

Our next diagram (C) represents a front segment of a transverse section of the Globe



of the Eye, and again exhibits that beautiful arrangement of parts for which this organ is so remarkable: at No. 1 we see the divided edges of the three tissues, the *sclerotic* (outer), *choroid* (middle and dark), and *retina* (inner), which last is composed of three membraneous layers, the external being serous, the middle nervous, and the internal vascular. 2 is the *Pupil* of the Eye, that central spot, which enlarges or contracts, according as more or less light is required to be admitted; 3 is the *iris*, so called from iris, a rainbow, on account of its variety of colour in different individuals; it is composed of an anterior muscular layer, consisting of radiating fibres, as seen in the diagram, which converging from the centre towards the circumference, have the power of dilating the pupil; and also of circular fibres, which surrounding the pupil like a sphincter, performs the duty of contracting its area. The posterior, or hinder layer, is of a deep purple tint, and is hence named

uvea, from its resemblance to a ripe grape; this is the surface of the iris presented to view in the above section. 4 represents the ciliary processes, before alluded to, and 5, the scalloped anterior border of the retina, that third tunic of the eye, of which we have already given some account.

We have hitherto been looking upon this wondrous little globe from without, let us now take a view of it from within, as represented in diagram D. This is a posterior



segment of a transverse section of the ball: here again we see of course only the divided edges of the tunics on the three outer rings (1), from which extends the membrane covering the whole internal surface of the retina; 2 marks the entrance of the optic nerve—about which more will be said presently—with the vein known as the *arteria centralis retinæ* piercing its centre; 4 is the *foramen of Soemmering*, situated in the middle of the axis of the eye; this is a circular spot, surrounded by a yellow halo, called the *limbus luteus*; this halo is commonly obscured by a fold of the retina (5), as on the diagram before us; this foramen, which signifies an opening, has been found to exist only in animals which have the axes of the eyeballs parallel with each other, as man, the quadrumania, and some saurian reptiles; it is thought to give passage to a lymphatic vessel.

We have as yet said but little of the *Lens* or *crystalline humour*, marked 12 in diagram A, it is situated immediately behind the pupils, and surrounded by the ciliary processes which overlap its margin; it is less convex on the front than on the hinder surface, and is invested by a peculiarly transparent and elastic membrane called the *Capsule*, which contains a small quantity of fluid called the *liquor Morgani*, and is retained in its place by its attachment to the

zonula ciliaris, already described as a prolongation of the vascular layer of the retina.

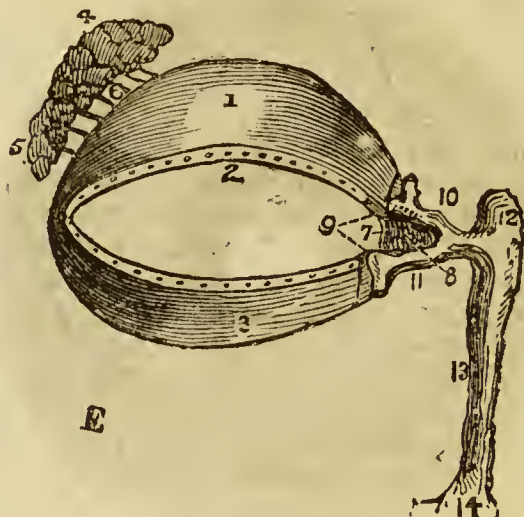
The lens consists of concentric layers formed upon a hard firm nucleus, and becoming softer as they tend to the outer surface; these concentric lamellæ are composed of minute parallel fibres united with each other by means of scalloped borders, the convexity of one body fitting into the concavity of the other.

Before leaving this part of our subject, we will give a brief summary of the *uses* of the several parts which we have been endeavouring to describe. The first tissue, the *sclerotic*, is simply one of protection; the *cornea*, is a medium for the transmission of light; the *choroid* supports the vessels, such as veins and arteries, by which the eye receives nutriment; and also, by its inner layer of *pigmentum nigrum*, absorbs all scattered rays, by which an image impressed on the *retina* might be confused. The *iris*, by its power of expansion and contraction, regulates the quantity of light admitted through the pupil; if it be thin, and the rays pass through its substance they are absorbed by the *uvea*; and if the power of that layer be insufficient, they are taken up by the black pigment of the *ciliary processes*. Where, as in *Albinos*, there is an absence of the *pigmentum nigrum*, the rays of light traverse the iris and even the sclerotic, and so flood the eye with light that the sight is destroyed, except during the dimness of evening. Opticians are well aware of the absorbing power of dark colours, and take care to have a black lining to their instruments; but what man ever made an instrument like the eye, with its transparent laminated cornea, and various humours, so constituted and arranged that they refract the rays in such proportion as to produce a perfect image upon the retina, and convey such exact and vivid pictures of outward objects to the mind within, that sits enthroned, who shall say where?

When the body of the refracting medium is too great, owing to over-convexity of the cornea and lens, the image falls short of the retina, unless the object be brought very close, this is near-sight; when there is an opposite condition of things, so that the image is thrown beyond the nervous membrane, we have what is called far-sight. See *Sight, Spectacles*.

Of the various nerves, veins, and arteries which traverse the eye, we need not attempt a description, to some of the principal of them allusion has already been made; but to the *appendages* we must devote a little space. These are, first, the *Eyebrows*

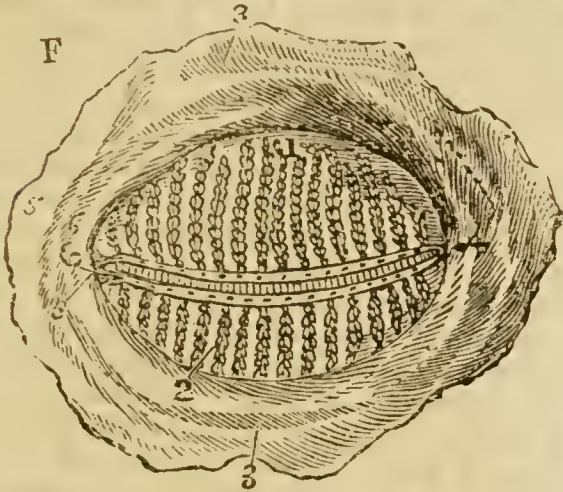
(*Supercilia*), two prominent arches of integument, covered more or less with thick short hairs, and forming the upper boundary of the orbits; their obvious utility is to shade the eyes from too vivid a light, and to protect them from particles of dust and moisture from the forehead; second, the *Eyelids* (*Palpebræ*), which have been well called the *Curtains of the Eyes*; when drawn open, they leave an elliptical space sufficiently large for the purposes of sight, and when closed, as in sleep, they effectually defend the delicate organs which they cover, from injury. If we inquire into the structure of these two valvular Eye-curtains, we find that they consist of integuments, muscles, cartilages, glands, and the mucous membrane called *conjunctiva*, which covers the whole of the anterior surface of the eye, and is reflected back so as to form the internal layer of the lids. In diagram E, we have a repre-



sentation of some of these Eye-appendages. No. 1 is the *superior* or upper *tarsal cartilage*, along the lower border of which (2) are seen the openings of the *Meibomian glands*, of which more anon. 3 is the *inferior*, or lower, *tarsal cartilage*, along the upper edges of which are also openings of the above-named glands; 4 is the *superior* or orbital portion of the *Lachrymal gland*, from which come tears, and 5 is its inferior or palpebral portion; 6 represents the *Lachrymal ducts*, or channels through which the tears pass to the outer surface of the eye. 7 is the *Plica semilunaris*, containing a small plate of cartilage, which appears to be the rudiment of a third lid, such as is developed in some animals. 8 is the *Caruncula lachrymalis*, which is the source of the whitish secretion which so constantly collects in the corner of the eye; it is covered with minute hairs, which can sometimes be seen without the aid of a microscope. 9 is the *Puncta lachrymalis*,

the point, or external commencement of the ducts, which terminate at the *lachrymal sac*, the position of which is marked by 12; as are the *superior* and *inferior lachrymal canals* by 10 and 11. The *nasal duct*, marked by 15, and 14 is its dilation with the lower meatus of the *Nose* (which see).

We now turn to diagram F, which represents the *Meibomian Glands* as seen on the



inner sides of the Eyelids (1 and 2); the *Conjunctiva* is marked by 3, 3, and the apertures of the glands along each corner of the lids, by 4; the *Papillæ lachrymales* and the *Puncta lachrymalia* are distinguished by 5, 5, 6, 6, and the apertures of the ducts of the *Lachrymal Gland* by 7. On examining the inner aspect of the Eyelids, these Meibomian Glands can be distinctly seen, arranged like strings of pearls, about thirty, on the cartilage of the upper lid, and somewhat fewer in the lower, where also they are shorter than those above, as they correspond in length with the breadth of the cartilage. Each of these glands consists of a single lengthened follicle, or tube, into which a great number of small clustered glandular vesicles open; and from these tubes the secretion is poured out upon the margins of the lids, which, being thus kept constantly moist inside, are in a condition to lubricate and wash the surface of the cornea, which they do in the motion of winking.

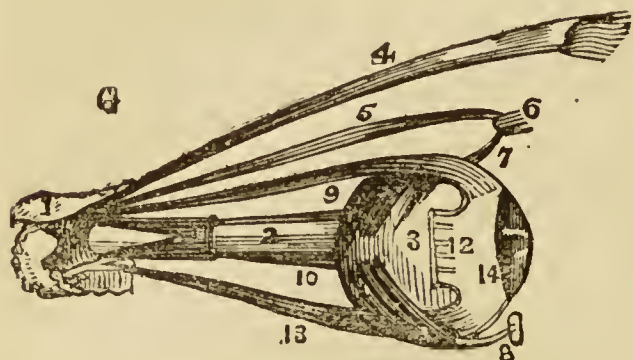
The Eye-lashes (*Cilia*) have now to be mentioned; they, too, are important organs of defence for the delicate surface of the eye, for whose curtains they form, as it were, a silken fringe. (For further particulars relating to the construction and powers of this organ see *Light, Sight*).

We have now to speak of the *Diseases of the Eye*; these are numerous, and sometimes very difficult of treatment, owing to the extreme susceptibility and delicacy of texture of the parts involved;

they admit of classification thus:—1st, Diseases of the Eye generally (see *Ophthalmia*); of this oculists distinguish 10 varieties; 2nd, Diseases of the Eyelids, 16 varieties; 3rd, Diseases of the Conjunctiva, 2 varieties; 4th, Diseases of the Cornea and Chambers of the Aqueous Humours, 8 varieties, 1 of which has 4 subdivisions; 5th, Diseases of the Iris, Lens, Capsule, and Vitreous Humours, 9 varieties; 6th, Cataract, divided into true and false, the first having 4 varieties, one of which has 14 manifestations, and the other 5 varieties: then there is *Amaurosis*, complete and incomplete, the first with 3, and the second with 18 varieties. Who after this shall say, that an oculist has not something to learn, or wonder that scientific men of great ability devote their whole time and attention to a study of the Eye alone? The various operations which they are called on to perform, and those of the most difficult and delicate nature, are almost as numerous as the varieties of disease above enumerated; thus, for cataract we have couching, or depression, performed in two ways, one by puncture of the cornea, the other by the removal of the opaque lens out of the axis of vision, by means of a needle; and extraction, in which this object is effected by division of the cornea, and laceration of the capsule. The operation for artificial pupil is performed in six different ways, and so on. Well, then, may volumes be written about the Eye; it is a small organ, but a large subject, and we may well hope to be excused, if we fail in giving a very comprehensive account thereof.

This wondrous globe that we have been attempting to describe, lies within its bony socket, or conical-shaped orbit, whose projecting edges, especially that above, whose line is marked by the Eyebrow, protect it from injury. Besides being, as it were, embedded in fat, it is slung, or suspended on a kind of membrane, and its various movements are effected by means of seven muscles, called *Recti* muscles; the position and office of which will be best understood by a reference to diagram G, which represents the Eyeball with its muscular appendages, as viewed from the outer side of the right orbit, which is entered through the *Sphenoid Bone* (1), by the *Optic Nerve* (2); this nerve passes, as we have already explained, to the globe of the Eye (3), of which it is the great organ of sensation; the upper muscle (4) is called the *Levator Palpebræ*, the Lifter of the Eyelids; 5 is called the *Superior Oblique*, from the direction in which it draws the Eyeball; we see its

cartilaginous pulley (6), and the reflected portion passing downward to its point of connection with the ball, beyond which



the *Inferior Oblique* has its bony origin; the point of which is marked by the little square knob. The other four muscles are called *Recti*, straight; the *Superior Rectus*, sometimes called the *Levator Oculi*, erector of the eyes, and sometimes *Superbus*, because its action gives an expression of pride; its opposite (13) is the *Inferior Rectus*, sometimes called *Deprimus oculi*, depressor of the eye, and *Humilis*, as giving an expression of humility; the *Rectus Internus* (10) is sometimes called *Adductor Oculi*, from its drawing the Eyeball towards the nose, and *Bibitorious*, a sort of punning name, in allusion to the cup, or orbit, towards which it directs the glance; and its opposite the *Rectus Externus* (11 and 12), the one showing its two heads of origin, and the other its termination; the intervening portion of muscle (having been removed) has the name of *Abductor Oculi*, because it turns the ball outwards; *Indignabundus* is another name for it, as giving an expression of scorn; in our diagram, the internal rectus passes behind the optic nerve, which partly conceals it; 14 marks the *tunica albuginea*, or white tunic, formed by the expansion of the tendons of the four *Recti muscles*. We trust that the muscular machinery of the Eye will now be fully understood by our readers.

It must be evident, that we cannot give a specific account, with directions for treatment, of all the forms and manifestations of Eye disease, nor is it necessary; a few only of them, such as are most prevalent and open to domestic treatment, need be touched upon.

The Eyeball itself is liable to be affected by *Acute, Chronic, Purulent, and Strumous Ophthalmia*, the first of which is confined to the conjunctiva, or outer-covering of the front of the eye; its chief symptoms are a smarting sensation, and a feeling like that caused by the presence of dust; there is also consider-

able stiffness, and the whites become tinged with red, owing to the veins being suffused; on a close examination, the red vessels may be distinctly traced, and it may be observed that they move with the surface, showing that the inflammation is but superficial.

Treatment. Warm bathing of the Eye, combined with an active mercurial treatment, should first be tried; if the habit of the patient is such as to bear this, 5 grains of Blue Pill at night, and a Saline or Black Draught in the morning, continued for three successive days, or alternate days, may be given; if not, the Mercury must be taken in a milder form, as in the Grey Powder, and combined with Rhubarb, say 3 grains of the former, and 8 or 10 of the latter, every other night; the diet should be low, and light excluded as much as possible from the inflamed organ. Should the warm bathing not produce a good effect, in a couple of days or so, use the following lotion: Wine of Opium, 1 drachm; Sulphate of Zinc, 8 grains; Acetate of Lead, 16 grains; Rose, or plain Distilled Water, 8 ounces; dip a piece of linen in this lotion, and bind it, not too tightly, over the eye, letting part of the fold hang down so as to cover it well; keep this moistened; should it be necessary to resort to other measures, drop into the eye, from a quill, or small glass tube, a Solution of Nitrate of Silver, the strength about 4 grains to the ounce of Distilled Water, 2 or 3 drops three times a day, and apply leeches. When this disease continues long, the inflammation extends deeper, and it becomes *chronic*, which has all the symptoms of the *acute* form of disease, except the feeling as of dust in the eyes; the latter of the above measures will generally reduce it, or should not the Nitrate of Silver drops succeed, use Wine of Opium alone in the same way, and a lotion made with Green Tea, and about one-sixth of its bulk of Brandy, or other strong spirit. If, in spite of these remedies, the veins of the lids begin to swell on the outside, showing that the inflammation is spreading, blisters should be applied behind the ears, and the system yet more reduced if it safely can. In this case there is a plan of treatment, which generally succeeds in giving relief, and it is really not so dangerous and formidable as it may seem. Let the lid of the affected eye be carefully closed, damp the outside with a sponge, then draw a stick of Lunar Caustic (Nitrate of Silver) gently and evenly across the moist surface in successive lines, taking care not to go over one part twice; suffer the application to dry without opening the lid, which in a few hours will begin to swell, and soon

attain such a size as to cause total blindness; this may continue perhaps for a day or two, the cauterized surface during the time discharging a large quantity of serum; the swelling will then gradually subside, and in a few days more, with the help of a dressing of simple ointment, the skin will have resumed its ordinary appearance, and all symptoms of inflammation will probably be gone. Gold diggers and other colonists, with whom Ophthalmia is not uncommon, and who cannot command professional aid, will find this an effectual and easily-applied remedy.

In this country the form of Ophthalmia known as *purulent* does not often occur except in infants newly born; the *symptoms* are swelling and redness of the lids, which may be observed a few days after birth; a thick pus is secreted within, which exudes between the partly closed lids, and drying at the edges, glues them firmly together, so that there is great difficulty in getting them open to examine into the extent of the mischief behind these closed curtains; when by dint of warm water sponging we are enabled to draw the lids gently back with the fingers, we observe that the whole surface of the eye is of a bright scarlet colour, and much swollen. The *treatment* in this case must be energetic, or the sight will be lost by the sloughing of the cornea; Nitrate of Silver in the form of Ointment should be introduced between the lids without delay; this may be done by means of a silver bodkin, should not a surgeon's probe be attainable; the Citron Ointment of the shops, which is the *Unguentum Hydrargyri Nitratis* of the Pharmacopœia, may be used, if not too stale and discoloured; it must be rubbed down, or partly melted, with a little Oil to soften it, taking care to use no steel implement in the mixing. A form more to be depended on than this, however, is the following:—Rub down in a glass mortar, until reduced to a very fine powder, 10 grains of Nitrate of Silver, add to this 1 ounce of pure Lard and mix well, then drop in 10 drops of the Solution of Acetate of Lead (*Liquor Plumbi Acetatis*), and again rub until the whole is thoroughly incorporated; a piece of this about the size of a grain of wheat to be introduced, as above described; this is a powerful remedy, and should only be resorted to in domestic treatment where the case is desperate, and a surgeon cannot be procured. The *strumous* form of Ophthalmia is occasionally met with in persons of all ages, but it more especially attacks weakly and scrofulous children who are under 8 or 10 years of age; a peculiar into-

lerance of light is one of its most marked *symptoms*; a spasmodic closure of the lids takes place whenever much light is presented to the eye; on forcing them open, the conjunctiva will generally be found universally inflamed, but sometimes only partially so; but that which especially distinguishes this form of Ophthalmic disease is the presence of, it may be one, or two, or several, little bright red pustules, each terminating a vein of the same colour, and the parts on which they exist are the most inflamed. Local applications will do little or nothing for the cure of this disease; the treatment must be general and generous; the *cause* is usually obstructed or unhealthy secretions, and if these are rectified the effect will soon disappear. Attention must be first paid to the state of the *liver* and *kidneys*, if these are deficient in action—if there is anything wrong with the *bile* or the *urine*—administer the appropriate remedies. (See those heads.) After this administer tonics in combination with sedatives, say Quinine, and Digitalis; or if this affects the action of the heart too much, Conium; they may be given in the form of Pills, 1 grain of the first and $\frac{1}{3}$ of a grain of the second or third, three times a day. With some constitutions, the Iodide of Potassium acts best; therefore, if the above does not succeed, take thereof 2 scruples, Compound Essence of Sarsaparilla 4 drachms, Tincture of Digitalis, or Conium 1 drachm, and Cinnamon or Mint Water 8 ounces; it is sometimes advisable to add to this, Sweet Spirits of Nitre about a drachm. In obstinate cases, the pustules may be touched with Nitrate of Silver, but this should be left to a surgeon.

Either of the above forms of Ophthalmia, especially the two latter, may result in *Ulceration of the Cornea*, which in its more dangerous form is caused by extensive inflammation of the cornea itself; in its less dangerous form by the little pustules already spoken of; in the latter case, the treatment should be like that of Strumous Ophthalmia; in the former it cannot be too active and energetic, as there is little chance of saving the eye by other than the strongest methods: Calomel and Opium, Blisters, Leeches, and the free use of the Lancet will no doubt be employed by the medical man, and no other can detect the niceties of the case sufficiently well to treat it properly.

Rheumatic Inflammation of the Eye, has its seat in the middle or Sclerotic coat; it is characterized by intense pain, which becomes more severe towards night, when it is generally accompanied by fever, and constant aching of the bones of the orbit; in

this case it may be seen that the inflammation is deeply-seated, by the immobility of the red veins, when the lids are moved about; the treatment here will be like that of *Acute Rheumatism*, (which see).

Inflammation of the Iris is characterized by intolerance of light, but not the spasmodic closure of the eyelids before mentioned; the whole coloured part of the eye loses its clearness, and sometimes has on it white or yellow spots; a pink zone invests the cornea, and seems to give a tinge to the whole front of the ball. This is a very rapid and violent form of Eye-disease, and bleeding, mercurials, and strong purgatives must be resorted to if they can possibly be borne; 2 grains of Calomel with a $\frac{1}{4}$ of a grain of Opium, given every six hours until soreness of the mouth is produced, and if it does not open the bowels freely, Black Draughts every morning, very low diet, and blisters behind the ears, are the orthodox remedies, and the best.

Of that opacity of the crystalline lens called *Cataract*, we have spoken under its proper head (which see); there is another disease which, without any such opacity, or paralysis of the nerves, produces blindness, and this is termed *Glaucoma*. It is characterised by an unusual dilation of the pupil, which contracts but sluggishly, and has generally a greenish-brown hazy appearance; this is not very amenable to medical treatment. Counter-irritants, such as Blisters, may be tried, with Mercurials and Iodide of Potassium, but there is little chance of preserving the sight, which has usually become impaired before the above symptoms declare the nature of the disease, which is often mistaken for Cataract; the mischief, in this case, seems to be deep in the vitreous humour, the cloudy appearance of which can only be seen when the eye is looked straight into.

Inflammation of the Choroid is known by its accompanying dull heavy pains; and by bulging and discoloration of the white portions; this, like *Dropsy of the Eye*, which occurs in the aqueous and vitreous humours, causing enlargement and loss of sight, cannot be treated by other than a skilful surgeon, and seldom by him with success. The aid of such must also be sought for Cataract of the Eye, the only cure for which is the entire removal of the ball, an operation by no means dangerous, and easily gone through by the aid of Chloroform. (See *Cataract*).

For *Amaurosis*, (see that head); for Near or Short-Sight, (see *Sight*)—(see also *Squinting*). It should be borne in mind that when Lead or Mercury, in any of their forms of

combination, are applied to the eye for any length of time, they are likely to produce Opacity of the Cornea, and consequent dimness of vision, and even without this result, the white, by the use of Nitrate of Silver, may become permanently stained of an olive colour.

We have now to speak of those Eye affections which relate rather to the appendages than to the globe itself; although, from the intimate connexion existing between all parts of this complex organ, no one part can be morbidly affected, without the rest partaking, to some extent, in the mischief.

Styes are little inflammatory tumours which frequently make their appearance on the edges of the Eyelids of children, they rarely affect grown persons, and, although troublesome, are not at all dangerous locally, nor prejudicial to the general health; they run the same course as boils, which, in reality, they are; generally speaking, they require no medical treatment, but when very large and painful, a Hot Water Fomentation will prove beneficial; when once the matter has escaped, they heal very quickly, a simple dressing of Spermaceti Ointment is sometimes required, but not often.

The edges of the eyelids are sometimes very red and stiff, in consequence of the inflammation of the small follicles or ducts which open there; the best remedy is a little Red Precipitate Ointment rubbed into the roots of the lashes, when the lids are closed on retiring to rest; this may be repeated every night until no longer required. A little Grey Powder, combined with Rhubarb, should be given, and the patient kept quiet and somewhat low. When inflammation has been going on in the eyelids for a time, their insides when inverted, will often present a rough granular appearance; in this case they should be gently rubbed over with a smooth piece of Dry Sulphate of Copper; the lid should be kept open after the application until the eyeball is syringed with warm water, to remove from it any of the solution caused by the flow of tears acting on the sulphate; there will probably be great smarting of the eye, and increased redness of the white portion, which must be suffered to subside before the application is repeated, which it will, most likely, have to be many times. Low diet, and Mercury with Rhubarb, as recommended in the last case, are also required in this. Sometimes the hairs on the lids grow inwards and cause great irritation of the balls; Collodion brushed over the lids will, as it dries, cause contraction of the skin, and so draw the hairs outward, but this is only a tempo-

rary relief, and the application must be frequently repeated; surgical aid must be sought for the case, which is called *Trichiasis*.

Entropium and *Extropium* are turning in and turning out of the edges of the Eyelids; in the first case the lashes rub against and inflame the ball; in the second the inside of the lid is exposed, and becomes sore and inflamed; only a skilful operator can effectually deal with these two forms of Eye disease, although some relief may be afforded in the former of them by the Collodion application above described. *Ptoxis* is a dropping of the upper eyelids in consequence of palsy arising from disease of the nerve which supplies the Levator muscle; sometimes the dropping is partial, sometimes entire, so that the whole eye is covered; this is a symptom of organic disease, which may be of a trivial and temporary character, or extensive and permanent: no domestic treatment can be of any service in the case. Small *encysted tumours* and red spots called *navi*, frequently appear about the Eyelids, and also little abscesses, the latter especially after erysipelas, small pox, or any other inflammatory diseases which affect the cellular membrane, which is very loose about the Eye. The latter may be pricked with a common lancet, when there is no doubt about their character; but the former should not be meddled with except by experienced hands. Diseased conditions of the apparatus for the conveyance of tears from the lachrymal sac to the nose, sometimes occur; only a surgeon can attempt to remove the obstructions, and remedy any defects which may be discoverable in the organs.

As to *Squinting*, *Optical Illusions*, or *Spectra*, *Near and Short Sight*, our readers will find full particulars in relation thereto, under their several heads. We have now gone through most of the diseases to which the Eye and its appendages are subject, in as full, and we trust satisfactory a manner, as our space would permit. A few remarks on the appearance of the Eye as symptomatic of disease, may be useful in conclusion.

A *Blood-shot Eye* may indicate either inflammation, or congestion, or extravasation of blood in the organ itself, or catarrh, or influenza, but measles especially.

Contracted Pupil, if it be not the result of local disease, shows that some serious mischief is going on in the brain; there may be compression, or watery effusion; this is not unfrequently the result of taking large doses of opium.

Dilated Pupil occurs in amaurosis, and several diseases of the brain; small doses of

Opium will frequently produce this; and the outward application of Atropine, or Belladonna, will nearly always do so.

Intolerance of Light we have already spoken of as a symptom of Strumous Ophthalmia; in severe headaches, fevers and inflammation of the brain it is also met with.

Prominence of the Eyeballs may result from dropsy of the eye itself, but it is often symptomatic of some obscure disease, affecting the *Brain* or *Heart* (which see).

Smarting of the Eye occurs in acute Ophthalmia, and in that stage of measles in which these organs are particularly affected.

Squinting, although commonly a chronic condition of the muscles of the eye, is, when it comes on in the course of active disease, indicative of mischief in the brain, which may terminate in *Apoplexy* (which see).

Watering of the Eyes is, when acute, symptomatic of Influenza; when chronic, of some obstruction to the flow of tears through the nasal duct.

Yellowness of the Whites of the Eyes precedes and accompanies Jaundice, and indicates an improper action of the *Liver*, (which see), and *Bile*.

EYE BRIGHT. The plant formerly known as *Euphrasy* (which see).

F., or Ft. Abbreviations of the Latin word *fiat*, or *fiant*—let it, or them, be made; used in *Prescriptions* (which see).

FACE AGUE. A painful affection of the nerves of the face. See *Neuralgia*.

FACE (Latin *facies*). The lower and front portion of the *Head* (which see). It consists of fourteen bones firmly joined together, except in the instance of the lower jaw-bone. The principal cavities are the orbits of the eyes, the opening for the passage of the tears into the nose, and the opening for the optic nerves. The nasal cavity in the skull is large; the nose being composed chiefly of cartilage, divided by thin vertical plates, pierced above with numerous holes for the passage of the olfactory nerves. (See *Nose*), also *Jaws*, *Teeth*, &c. There are several medical terms founded upon the Latin root *facies*; such as *F. Hippocratica*, the peculiar appearance of the face immediately before death, described by Hippocrates. (See *Countenance*; *F. rubra*, see *Gutta Rosacea*, or Rosy Drop; also *Acne*.) Then we have *Facial*, belonging to the face; as the *Facial Angle*, an angle composed of two lines; one drawn in the direction of the basis of the skull, from the ear to the roots of the upper incisor-teeth, and the other from the latter point, touching the most projecting portion of the forehead; *Facial Nerve*, applied to

the *portia dura* of the 7th pair, as the *Trifacial* is to the 5th pair. The *Facial Vein* is that which commences at the summit of the head and forehead. (See *Angular, Veins*.) There is another of these terms used by the French physicians—viz., *Face Grippée*. See *Physiognomy*.

FACTITIOUS (Latin *factito*, to practice). Anything made or produced by means of art, in opposition to the natural production; thus we apply the term to diseases produced wholly or in part by the patient (see *Feigned Diseases*); also to waters prepared artificially in imitation of the natural ones of Cheltenham, &c.

FACULTY (Latin *facultas*). The power or ability by which any action is performed. The term is also applied to the whole body of professors of the medical art. See *Physician, Surgeon*, &c.

FÆCES (Latin, plural of *fæx*, dregs). The rejected residue of the food passed into the stomach after it has served the purposes of nutrition. (See *Excrements*.) According to Berzelius, the normal constituents of human fæces are as follows:—Water 73·3, Vegetable and Animal Remains, 7·0; Bile, 0·9; Albumen, 0·9; Peculiar Extractive Matter, 2·7; Salts, 1·2; Slimy Matter, consisting of Picro-mel, Peculiar Animal Matter, and Insoluble Residue, 14·0=100·0. This is the condition of the fæces when the health is perfect, and there is nothing very peculiar in the diet to render it otherwise; in diseases, great changes take place, not only in the proportions, but even in the ingredients of which the fæces are composed: by their peculiarities of substance, smell, and colour, the medical man is enabled in a great measure to judge of the nature and progress of the mischief going on within; therefore it is of importance that they should be preserved for his inspection; the following are a few of their most obvious indications.

Natural motions are of a gingerbread colour, slightly varying in tint and hue, and of tolerable solidity of consistence, although perfectly impressible. The smell is offensive, but has not that peculiar fetidity which is observed in some diseased conditions of the system. The evacuation should be daily, and at or near a certain hour; but a deviation from this rule is no proof of ill health, we have known persons, in a perfectly healthy state, who only went to stool once in two, three, or four days, and even a week; it depends greatly upon habit, but such a habit is not good. Children should be taught to go at a certain hour every day, and the habit of a

daily evacuation of the bowels, once fixed, will probably remain through life, except when it is interfered with by sickness, or the failing powers which are often a consequence of old age.

Mucous evacuations have a semi-transparent, jelly-like appearance; they may be tinged with brown, green, or yellow, all indicating the presence of bile; or red with blood, when there is inflammation or congestion of the mucous membrane, as in mucous *Diarrhœa* and *Dysentery*.

Lymphatic evacuations have a rough, shreddy, or spotty appearance; there may be little irregular round specks, like dirty white of egg, scattered through the fæces, or long pieces like shreds of lymph or dingy-coloured parchment; in this case it is likely there may be acute inflammation of the mucous membrane of the intestines, the seat of which may be in any of the bowels, or merely the rectum. This, like the above, is a symptom of *Diarrhœa* and *Dysentery*.

Pus in the Fæces indicates either ulceration of the bowels, or the breaking of an internal abscess into the alimentary passages; if there is much of it, the latter is most likely the case. This is a dangerous symptom. (See *Abscess, Ulceration*.)

Bile in the Fæces indicates excessive action of the liver, the cause of which may be excessive irritation, or active congestion; in which case the colour is generally of a bright yellowish brown, but sometimes, especially in children, it is of a decided green colour: this too is often the case with grown persons, when the liver is just recovering from a torpid state and beginning to act violently; this is commonly the case, too, in hydrocephalus, when the colour is a peculiarly deep green. Bilious motions may, or may not, be loose, although they are generally so, from the bile acting as an irritant in the lining of the bowels.

Absence of Bile in the Fæces is shown by absence of colour; the motions are clayey, sometimes as pale as pipeclay, and ranging from that shade up to the natural hue, occasionally assuming a greyish tint; they vary in substance, and when liquid are usually frothy, and float upon water on account of the quantity of gas which they contain.

Loose Motions proceed from so many causes, that we cannot take them as clear indications of any particular diseases; they are always present where there is an irritated or inflamed state of the mucous membrane, as in *Diarrhœa*, in some stages of which they become altogether *Watery*: if, when in this state, they exhibit rice-like particles, they

indicate *Asiatic Cholera* (which see), or the too powerful action of saline, or drastic purgatives.

Solid motions, when too much so, indicate *Constipation* (which see). *Offensive* motions occur in dyspepsia, especially those forms of it which are associated with hypochondriasis; the factor is excessive in low fevers, when the poison introduced into the system seems to render the whole of the solids and fluids thereof peculiarly liable to decomposition.

FAHRENHEIT. The inventor of the thermometer which bears his name, and which is generally used in medicine and the collateral sciences; his Christian names were Gabriel Daniel, and he was born at Danzig near the end of the seventeenth century; he was elected a fellow of the Royal Society of London in 1724, and died in 1740. See *Thermometer*.

FAINTING. This is a state of total or partial unconsciousness, occasioned by diminished action of the heart, causing a less rapid circulation of blood through the brain. The causes of it are various, and sometimes very peculiar, such as a particular smell; that of a rose for instance, has been known to occasion it; certain objects presented to the sight; surprise, joy, fear, or any sudden emotions; loss of blood, or anything which tends to debilitate the system by diminishing the vital energy.

The first sensation of fainting to the patient himself is generally a singing in the ears, then the sight becomes confused, and all the senses deadened; a clammy sweat breaks out over the person, the countenance becomes deadly pale, and the limbs refuse to support the weight of the body, which sinks to the earth as helpless and motionless as a corpse; indeed the condition so closely resembles that of death, that it is difficult to distinguish it therefrom. This is a complete faint; frequently the fits are only partial and very limited in duration; but whether so or not the best *treatment* is to place the patient in an horizontal position; free the face, neck, and upper part of the chest from all incumbrances; let the fresh air play freely upon them, and sprinkle the former with cold water; holding to the nostrils from time to time some volatile stimulant, such as Harts-horn or Ammonia; as soon as swallowing can be accomplished, administer about 30 drops of Spirits of Wine, or Sal Volatile, in Water. The after-treatment will of course depend on the cause.

As the first stage of some forms of Apoplexy and Paralysis is one of faintness, a

little discrimination should be used in the administration of stimulants. Where the seizure, too, is in consequence of loss of blood, no violent efforts at restoration should for a time be made, as this state is necessary for the patient's safety. See *Syncope*.

FAITH. In medicines has much to do with their good effect, hence the most wondrous cures often effected by quack nostrums. Without faith in his skill and judgment, and, as a consequence, in the medicines he administers, the medical man has a most difficult game to play; it is that faith only which can induce a patient to go on day after day, month after month, nay, year after year, pursuing the same round of draughts and pills and mixtures, and assuring himself that he is all the better for them, while his medical attendant, knowing he can only charge for so much medicine sent in, continues the supply, although he is probably aware that little good can come of it. And this arises out of the absurd system of charging for medicines only. A patient grumbles at half-a-crown for a visit, and demands "stuff for his money," stuff he therefore has, far more than is necessary, and will continue to have, while he refuses to pay his doctor, as he does his lawyer, for *advice*. Faith in medicines, we say, is a good thing, for it gives them double efficacy, but an intelligent faith in the Family Doctor especially; the patient should believe, that whether he orders much or little, or no medicine at all, he is guided by the light of science, and the wisdom of experience. This is the faith we would have our readers cherish, and they will have a much better chance of being cured of those ailments which are curable, and of finding relief in those which are not, than if they took pills and potions by wholesale, and paid for their physic, as for their wine, by the hogshead.

FALCIFORM (Latin *falx* or *falcis*, a scythe, or sickle, and *forma*, likeness). Scythe-like; processes of the dura mater, called *Falx cerebri* and *F. cerebelli*, on account of their sickle-like curvature. See *Brain*.

FALLING SICKNESS. So called from the patient suddenly falling to the ground when attacked by it: *Caducus morbus* is the name by which it is sometimes distinguished, but it is more commonly known as *Epilepsy* (which see).

FALLOPIAN LIGAMENT and TUBES. The former of these is frequently called *Pourpart's Ligament*. It is connected with the latter, which were named after their discoverer, Gabriel Fallopius, an Italian anatomist of the 16th century. See *Ear*

FAMES CANINA. Canine, or voracious appetite. See *Bulimia*.

FARINA (Latin *far* or *farris*, corn). Meal, vegetable flour, procured by grinding the seed of *Wheat* (which see), and other grain; hence we have the term *Farinaceæ* applied to articles of food generally which contain farinaceous matter, including many vegetable products, such as the potatoe, beans, peas, &c.

FARINACEOUS FOOD. Any article of diet prepared from flour containing farina, such as that of the *cereal*, *legumina*, &c., in such a manner as to make it at the same time nourishing and easy of digestion. The term has been especially applied to a variety of preparations, said to be most suitable for children, invalids, and those of weak digestive powers; baked wheaten flour, finely sifted, appears to be the great staple of these preparations, which are, in the main, very wholesome and nutritious; some contain a proportion of sugar, and some an admixture of several kinds of meal, which is not, in all cases, desirable. Semola and Semolina are articles of this class, and in them there is a larger proportion of gluten, the nutrient principle, than in most others; rice and potato flour, in which there is a great deal of starch, are not so good; bean and pea meal often disagree with weak stomachs, nevertheless, a small proportion of these may be of service, mixed with wheaten and other flour. Hard's Farinaceous Food, consisting, we believe, of the finest flour of wheat, is unexceptionable, except on the score of price. The composition of the Revelenta Arabica and Aextra Mankaz, can scarcely be determined with sufficient accuracy to enable one to give an opinion of their merits as food for invalids; they appear to consist chiefly, if not wholly, of meal of some of the leguminous, or pea tribe of plants. On the whole, it is, perhaps, best, as it is certainly cheapest, to prepare this kind of food at home; there can be nothing better than highly baked wheat flour, finely sifted; should it be found to produce costiveness, a little barley-meal may be added, or it may be partly sweetened with Manna. It should be kept perfectly dry, and not exposed much to the air before it is used. See *Diet, Food*.

FAR SIGHTEDNESS. A state of vision which is most frequently observed in persons of advanced age. See *Presbyopia*, *Sight*.

FASCIA (Latin *fascis* a bundle). 1st, The name of a bandage; 2nd, of the aponeurotic expansion of a muscle, as *Fascia lata*, a name frequently given to the aponeurosis of the thigh. From the same root, comes *Fasciculus*, a little bundle or handful; thus

we say, using the plural of the term, that a muscle consists of a *fasciculi* of fibres: then again the fluke, an intestinal worm, is called *Fasciola Hepatica*. See *Vermes*.

FAT (Latin *adeps*). Solid animal oil: that of the human species consists of three proximate principles, *stearine*, *margarine*, and *oleine*, which at the temperature of the living animal body are fluid, but when, after death, the temperature falls, the two former become solid. It may be asked why, if it be in a fluid state while we live, the fat does not obey the law of gravitation and sink to some dependent parts of the body? The answer to this is, that it is enclosed in spherical cells, which prevent its diffusion. The uses of fat are two-fold, first it forms soft pads or cushions for the various bones and organs to work upon without injuring each other; and, second, it constitutes a store of combustible material, by the help of which the animal heat is kept up. Thus we find that animals which hybernate, or pass the winter in sleep, although generally plump and in good condition when they retire to their retreats, come out thence thin and meagre. We hear of creatures which have been buried in snow, or otherwise deprived of the means of obtaining food, living upon their own fat, meaning that this internal store of nutriment served to azotize the blood and keep up the degree of heat necessary for the performance of the animal functions.

A certain amount of fat, then, appears to be a requisite of sound health, and doubtless it is so, although we frequently see persons who have little or none of it hearty and vigorous; as, on the other hand, we do those whose excessive obesity would lead us to suppose that they were far from a healthy condition, as indeed they are, although their physical powers may for a time be unimpaired, and their mental energies unclogged by the corporeal weight which they have to bear: very fat people are always bad subjects for disease, especially if it be of an inflammatory character, and it is in such that we look for apoplexy, and other sudden terminations of life. Very commonly fat accumulates in the body as persons advance in years, and those often who are thin in youth become stout in the full maturity or decline of life; this may be owing in a great degree to the diminished activity of the daily habits, both mental and bodily; restless, busy people seldom grow fat, nor do those of a hypochondriacal and cynical cast of mind; it is your easy-going, good-natured men and women, who "laugh and grow fat," in

the merry twinkle of whose eye, and jovial chuckle, one reads of contentment and satisfaction with things as they are; but sometimes this obesity becomes a real disease, marring all the pleasures of life, preventing the performance of its duties, and shortening its duration; especially is this the case when it begins in childhood, or about the time of puberty, when there is frequently associated with it intellectual deficiency, and it is most desirable that efforts should be made to counteract as much as possible the tendency to increase fat. We cannot do better than quote the excellent remarks of Doctor Chambers on the measures to be adopted for this end:—"The first thing indicated in all cases is to cut off as far as possible, the supply of material. Fat, oil, and butter should be rigorously interdicted in the diet table. But all eatables contain some portion of oleaginous matter, and especially those most convenient to advise the use of for a lengthened period; and almost all are capable of a transformation into fat, when a small quantity of this substance is previously present. It is desirable, therefore, that the mass of food should lie in the stomach as short a time as possible, in order that at least a fatty fermentation may not be set up in it. Very light meals should be taken at times most favourable to rapid digestion, and should consist of substances easy of solution and assimilation. To this end the time of the meals should be fixed for an early hour in the day, before exertion has rendered the organs of nutrition languid and weak. Breakfast should consist of dry toast, or what is still better, sea-biscuit; and if much active exercise is intended, a small piece of lean meat. Dinner at one, on meat with the fat cut off, stale bread or biscuit, and some plain boiled macaroni, or biscuit pudding, by way of second course. Liquids should be taken, not at the meal, but half-an-hour after, so as not to impede the action of the gastric juice upon the mass. Here should end the solid feeding of the day; no second dinner, or supper should follow, nor, indeed, any more meals be taken sitting down. A piece of biscuit and a glass of water can be taken standing up, if faintness is experienced; a cup of gruel, or roast apple, before going to bed.

"The smallest amount of nutriment consistent with the health of the individual can be found by experiment only; but we need not fear that ten ounces of solid food a day is too little. It may be remarked, by the way, that it is often advisable to add a small allowance of malt liquor at dinner, as other-

wise the craving of the appetite is less easily appeased. The beers to be avoided are, of course, the thick, sweet kinds; but that which is thoroughly fermented at a low temperature, in the Bavarian way, seems to contain very little injurious matter. I do not know that any advice concerning sleep is peculiarly applicable to obese persons, beyond what we should recommend to all classes of men. They are usually uneasy sleepers, and though lethargic, by no means averse to early rising.

"In cases where the fat is largely accumulated in the abdomen, it is very convenient for the patient to wear a band round the cavity, which may be tightened gradually. The support thus given to the abdominal muscles relieves the dragging sensations in the loins which many persons, whose viscera are heavy in proportion to their strength, experience. It enables exercise to be taken with more facility, and appears also, by pressure, to afford some assistance to the absorption of fat. The above remarks will apply equally to all forms of obesity; the abstinence recommended can be borne even by the aged, and only comfort be experienced.

"As respects exercise, however, a distinction requires to be made. The young and vigorous, whose obesity does not prevent the use of their legs, cannot employ them more usefully than in walking as long as they are able. The greater number of hours per day that can be devoted to this exercise, the quicker will be the diminution of bulk. But as riding, by the gentle shaking of the abdomen, excites the secretions of the digestive organs more, it should, where practicable, be employed in addition. Where freedom of motion has once been gained, rowing, shooting,—any, or all, of the forms of British gymnastics, should be adopted as regular habits.

"Purgatives I have generally found not needed in the plethoric form; the bowels act usually once or twice in the day. But in the asthenic obesity of *old people*, where the abdominal walls are weakened by long pressure of an unnatural weight, it is necessary to employ them.

"But there is one class of medicines so peculiarly applicable to *all* cases of obesity, that I think a trial should never be omitted. The chemical affinity of alkalis for fat, point them out as appropriate alternatives in this complaint, and experience proves that they are suitable to the state of the digestive organs. The most eligible one is *Liquor Potassæ*, and it may be administered in much larger quantities than any other. If given in milk and water, we

may safely commence with $\frac{1}{2}$ a-drachm, and raise the dose to 1 drachm and $1\frac{1}{2}$ three times a day. The milk covers the taste of the Potash better than any other vehicle. It has truly the advantage of saponifying a portion of the remedy, but there is no evidence to prove that its efficacy is thereby endangered; indeed, soap itself has been strongly recommended."

It is a foolish habit with some to take large quantities of vinegar with the view of checking a real or supposed tendency to grow fat; they cannot do this without injury to the digestive organs, the effects of which will be felt in after years, if not at the time.

With regard to animal fat as an article of food, we may observe that it is generally difficult of digestion, and therefore those who lead sedentary lives, especially in warm climates, should partake of it but sparingly. In very cold climates large quantities of it may be taken, there indeed this kind of food is required, to keep up the supply of animal heat in the system; hence to the Greenlanders train oil and whale's blubber are in some degree necessities of life, while to the European, fatty food of a far more palatable nature, if taken in excess, increases the secretion of bile, and causes disorder of the digestive functions generally.

The fat of deer, of vipers, and various other animals was formerly used in the treatment of diseases, and in some cases of irritability of the membrane of the stomach, and low inflammation, such food is likely to be serviceable. Externally, fat is largely employed, and with great advantage. See *Adeps*.

FARCIMEN, or FARCY. The first of these terms is the name given by Sauvages to the equine species of scrofula, which, at the present day, is more commonly known by the last, or by *Glanders* (which see).

FARD is the French term for rouge, and other paints used for the face. See *Cosmetics*.

FATUITY. Foolishness, weakness of mind. See *Idioty, Moria*.

FAUCES (plural of the Latin *faux* or *faucis*, the gullet). This is the gorge or back of the mouth, being the space which lies between the uvula and arches of the palate above, and the root of the tongue and epiglottis below. See *Throat*.

FAUSSES EAUX (French for False Waters). Water discharged from the uterus during pregnancy, and attributed by some to the transudation of the *liquor amnii* through the tissue of the membrane. See *Pregnancy*.

FAVUS (a honeycomb). A term applied to a peculiar skin disease which is developed

in the shape of yellow cup-like scabs in which grow minute fungi; these are generally on the head, but sometimes elsewhere. See *Porrigo*, or *Scald Head*.

FAMINE (from the Latin *fames*). Destitution; scarcity of food. See *Starvation*.

FASTING. Abstinence from food either voluntary or involuntary; frequently practised by religious persons as a means of subduing the carnal passions and appetites, and bringing the body into subjection to the requirements of a holy life: it is not our province to enquire whether this practice is congenial with the true spirit of Christianity or not; we have to do with its effect upon the bodily health only, and under this head may say that as we nearly always eat too much, an occasional fast operates beneficially, by giving the digestive organs time to recover from the effects of over-labour. See *Abstinence*.

FEAR. This is a state or condition of the mind, which renders the treatment of disease especially difficult; it should, therefore, be a great object with parents and nurses, and all who are in any way concerned about children and sick persons, to avoid exciting these strong mental emotions, whose depressing influence may render nugatory all the remedial efforts of the most skilful practitioners. It is well known that contagious and epidemic disease never spreads so rapidly, and is attended with such fatal results, as among a community affected by fear; many a strong man, whose physical energy would have enabled him to maintain a severe struggle with disease, and, probably, come off victorious, overcome by a craven fear, has laid him down and died; while his far weaker brother has striven manfully with the destroyer, and passed safely through the same dangers, because he had faith to support him—faith in the guardianship of Providence, and in the human means adopted for his restoration to health.

Always then endeavour to inspire the sick with such a faith, and to fill their hearts with that perfect ease which casteth out fear; let all that is done for them be done with gentleness and kindness; speak to them hopeful and cheering words and without concealing from them any danger with which they may be threatened, and the necessity they are under to be prepared for Death and Eternity; encourage them by all means to have confidence in their medical adviser, and the means adopted for their relief. On the youthful mind, fear operates most powerfully, and the more so, perhaps, from being vague and undefined.

Naughty children are sometimes threatened with a visitation of "the Doctor," whose name is associated with all things nauseous and horrible; so that when it is really necessary for him to visit his little patients, he finds them in a perfect paroxysm of terror, with flushed cheeks, quickened pulses, unwillingness, if not incapacity, to answer the questions put them, and other disturbances of the natural order of things, which, whether they be the result of disease or of fear, it is often impossible for the much-dreaded doctor to determine.

On the other hand, it cannot be denied that sudden fright and terror have sometimes had a salutary effect in rousing the system to some mighty effort, by which it has been enabled to throw off the shackles of long-standing disease. This has been especially observed in paralytic cases, and some greatly depressed states of the nervous system; but as a general rule, the operation of fear is altogether mischievous, and we would counsel our readers to banish it as much as possible from the sick room and the nursery.

FEBRIFUGE (Latin *febris*, a fever, and *fugo*, to dispel). Any medicinal agent employed for the reduction of fever. We more commonly speak of this class of medicines now as *Antiphlogistics* (which see). *Diaphoretics* and *Refrigerants* are also Febrifuges; and so are *Tonics* at certain stages of *Fevers* (which see). Arsenic, Fowler's Solution; Antimonial Powder and Tartarized Antimony; Ammonia, Acetated Liquor and Muriate of; Peruvian Bark, and Quinine; Ipecacuanha; Nitrate of Potash; Nitrous and Sulphuric Ether: these are some of the principal Febrifuges now employed. Particulars of their nature and doses will be found under their several heads. The following will be found good formulas for Febrifuge Mixtures:—Take of Carbonate of Soda, or Potash, 2 drachms; Sweet Spirits of Nitre, 3 drachms; Syrup, 6 drachms; Water, sufficient for 6 ounces; pour out two tablespoonsful in a tumbler, and add 15 grains of Citric or Tartaric Acid, or a tablespoonful of Lemon Juice; drink while effervescing. Or take of Nitrate of Potash, 1 drachm; Sweet Spirits of Nitre, 3 drachms; Tincture of Hyoseyamus, 2 drachms; Liquor of Acetate of Ammonia, 1 ounce; Camphor Mixture, sufficient to make 8 ounces: take a tablespoonful every four hours: from 10 to 15 drops of Antimonial or Ipecacuanha Wine to each dose will make it act more energetically, and this addition is especially to be recommended when a cough is present. Anything which excites perspiration is use-

ful as a **Febrifuge**; hence warm, diluent drinks, and mustard foot-baths may be here mentioned.

FEBRIS (Latin *ferveo* or *ferbeo*, to be hot). Applied to a class of diseases characterised by increased heat. (See *Fever*), of which a slight attack is called *Febricula*.

FECULA (Latin *fecula*). This is a principle which appears to be universally diffused throughout the vegetable kingdom (see *Farina*, *Starch*). The term was originally applied to any substance derived by spontaneous subsidence from a liquid; afterwards its application was restricted to starch, which is deposited by agitating the flour of wheat, or other grain, in water; and, lastly, we understand by the term, that vegetable principle, from whatever plant derived, which, like starch, is insoluble in cold, but perfectly soluble in boiling water, with which it forms a gelatinous solution.

FECUNDATION (Latin *fecundo*, to make fruitful). The effect of the vivifying fluid upon the germ or ovum which in its fecundated state is termed the *Embryo* (which see), also *Generation*, *Impregnation*.

FEIGNED DISEASES. These may be pretended affections, local or general, which have no real existence; or such as are intentionally induced. Abdominal tumours, animals in the stomach, are of this class of diseases, which may be distinguished as—1st, those which are strictly Fictitious; 2nd, Exaggerated; 3rd, Factitious, produced by the patient; and 4th, Aggravated, originating without the patient's concurrence, but for some purpose artificially increased. Diseases are often feigned for the sake of exciting compassion, or to escape the performance of some unpleasant duty, and so well feigned that it is difficult to detect the cheat.

FEL BOVINUM. The Latin for *Ox Gall* (which see). *Fel Flua Passio* was an ancient name for *Cholera* (which see).

FELON. A malignant whitlow, in which the effusion presses on the periosteum (see *Whitlow*).

FEMORIS (Latin for the thigh). Hence we have *os femoris*, the thigh bone, which is the longest bone of the human skeleton; also *Femoral Artery*, the name given to the external iliac artery, immediately after it has emerged from under the crural arch; the term *Femoral* is also applied to the crural vein, which is a continuation of the Popliteal. See *Artery*, *Veins*.

The following cut represents the right Femur, seen in its anterior aspect; 1 is

the shaft, 2 the head, 3 the neck. See *Thigh*.



FENESTRA (Latin for a window). An aperture; hence the terms *F. ovalis* and *F. rotunda* respectively applied to the oval and round apertures of the Ear, sometimes called *Foramen ovale* and *F. rotundum*. See *Ear*.

FERMENTATION. (Latin *fermentatio*). A spontaneous change which takes place in animal or vegetable substances reduced to a moist or liquid state by water. Fermentations are of four kinds, viz.:—1st, the *Saccharine*, when sugar is the result of the change, as in that of starch; 2nd, the *Pannary* or *Vinous*, as that of flour, forming bread; or that of the grape and other juices, forming wine, and evolving alcohol; 3rd, the *Acetous*, when the result is acetic acid, or vinegar; and, 4th, the *Putrefactive*, commonly that of animal substances giving rise to various fetid products, and evolving ammonia.

FENNEL, SWEET. A plant common on chalky cliffs in the southern parts of England, which has leaves cut into hair-like segments, yellow flowers, and glaucous stems;

botanical name, *Foeniculum Vulgaris*; it is valued chiefly for the aromatic and stimulant quality of its leaves and seeds, which are



also diuretic, and are useful in flatulency; the latter, and the oil extracted from them, are chiefly used; the dose of the Bruised Seeds is from 1 scruple to 3; of the Oil 2 or 3 drops; but it is generally taken in combination with other aromatics.

FERMENTED LIQUORS. These are beverages which have undergone the process of alcoholic fermentation; they may also be considered as the natural products of hot climates, from the readiness with which the vegetable juices ferment in a high temperature. It is clear from ancient records, that such liquors have been used from the earliest periods; and no doubt abused greatly, as they are at the present time, and as all the good gifts of God are liable to be. The liquors of this class (chiefly in use now) are the various Foreign wines, mostly prepared from the juice of the grape; British or Home-made Wines, of Grape, Gooseberry, and other juices, mostly rendered fermentable by the addition of sugar; Cyder and Perry, the fermented juice of the

apple and pear; and Malt Liquors, having for their bases the saccharine principle of several kinds of grain, but chiefly Barley. See *Ale and Beer, Beverages, Drinks, &c.*

FERMENTUM (Latin *ferveo* to work). Balm or yeast; or any substance which possesses the power of commencing fermentation.

FENUGREEK. The *Trigonella Fœnum-Græcum*; a plant of the natural order *Leguminosæ*, found chiefly in the south of Europe; it is used externally in cataplasms,



and internally in Dysentery and Diarrhœa; but not now to any great extent.

FERN, MALE (scientific name *Aspidium Filis Mas*). A common native plant belonging to the natural order *Filicales*, chiefly used as a remedy for tape-worm; and, until lately, too much neglected, for it is an excellent anthelmintic, equal, if not superior, to the much-vaunted *Kousso*. We give a cut of the plant, but there is so great a similarity in the growth of many British Ferns, that only a botanist could be sure of the species. The rhizoma or root, which is the part of the plant principally used, should be collected between the end of May and middle of September, cleared of root fibres, decayed parts, and earth, but not washed: dry quickly and thoroughly in the open air, in a shady place: powder those parts alone which are greenish internally, and keep in well stopped bottles in a dry place. The dose of this powder is from 1 to 3 drachms: it should be given on an empty stomach, and followed, in the

course of two or three hours, by an aperient; Castor Oil is, perhaps, the best. There is an Oil of Male Fern, obtained by evaporating an Ethereal Tincture of the buds or roots, and this is the pleasantest and most convenient form of administration. It may be



taken thus:— $\frac{1}{2}$ a drachm mixed with 2 ounces of Mucilage: half at bed-time, the rest in the morning, with an ounce of Castor Oil 3 or 4 hours after the second dose. We have known several large worms completely expelled by this remedy. A Decoction of the fresh root or buds is also effectual: dose about 4 ounces; of the Ethereal Tincture from one to 2 drachms may be given; and of the Extract from 10 to 30 grains. See *Anthelmintics, Vermifuges*.

FERRO-CYANIC ACID. A compound of Cyanogen, Metallic Iron, and Oxygen. It has been called *Ferruretted Chyazic Acid*; it contains the elements of Hydrocyanic or Prussic Acid, but differs from it in its properties. Its salts, formerly called Triple Prussiates, are now termed *Ferro-cyanites*, of which Prussian Blue is one of the most familiar examples.

FERRUM (Latin for *Iron*, which see). The terms *Ferrifila*, iron wire; *F. ramenta*, iron filings; *F. rubigo*, rust or carbonate of iron; *F. sulphus*, *F. ammoniatum*, and *F. tartarizatum*, and other combinations of the Latin root, will be frequently met with in pharmaceutical and chemical works.

FERULA ASSAFÆTIDA. The scientific name of the umbelliferous plant yielding the gum called *Assafætida* (which see).

FERULA PERSICA. The stinking Giant Fennel, a native of Persia, thought by some to yield the gum *Sagapenum*.

FETOR. A bad odour of any kind, resulting from putrefaction, decomposition, or fermentation; it may be developed either in the internal or external parts of the body, and thrown out in the various excreting processes. A very peculiar fetor is diffused from the breath and body of one under the influence of putrid fever and other malignant diseases; and from mercurial salivation arises what may be immediately detected as the mercurial fetor. See *Chlorine*, *Disinfectants*, *Mercury*.

FEU VOLAGE (French for flying fire). A name given by the medical writers of France to one of the forms of *Erythema* (which see).

FEVER (Latin *febris*, which see). The characteristic marks of Fever are an increase of heat, an accelerated pulse, a foul tongue; often cold chills and shivering, head-ache, sore throat, great thirst, and an impaired state of the functions generally.

The *causes* are various; among them may be named exposure to cold, heat, or wet, fatigue, long-continued watching, or mental anxiety, intemperance, unwholesome or insufficient food, breathing impure air, and all the bad local influences to which the lower classes, especially of large cities, are too often exposed, and the excesses and irregularities to which these classes are addicted. Most of the forms of Fever are epidemic, and their prevalence at or after periods of scarcity and privation, of unusual heat, or excessive moisture, render it impossible to doubt that there are certain states of the atmosphere, and conditions of the system, which render the latter peculiarly predisposed to febrile influence; and this is the case with all epidemic diseases, for many of which we look for an increase at particular times and seasons; thus, in the spring, measles prevail generally to a greater extent than at any other part of the year; scarlet fever is most common in the autumn; and typhus towards the close of summer, which, especially if it be cold and wet, is the season most productive of all kinds of fever. Small-pox again is known to be so much more prevalent

at some periods than others, that its propagation is evidently influenced by atmospheric causes, and so it is with any kind of Fever which, if it once appears under circumstances favourable to its development, spreads with alarming rapidity. Such is the case in the densely populated and ill-ventilated dwellings of the poor, in hospitals, and sick rooms, where numbers are necessarily confined in a limited space: among those classes who pay due attention to the rules of cleanliness, whose dwellings are airy and commodious, and diet wholesome and regular, we do not find that febrile diseases prevail much as epidemics, unless they live in localities where the air is rendered impure by that terrestrial poison, which we term *malaria*—bad air—the result of vegetable or animal decomposition; and even when it does affect such persons, the diseases do not commonly assume so virulent a form, and their progress is far more easily arrested, than under the circumstances first indicated. Contagion and infection, both of these perform their part in the propagation of Fever, and many secret, and often unsuspected influences, are at work to make them more certain and widely destructive in their effects; for instance, the effluvia or exhalations of the human body, not only in disease, but in a state of health, may, by concentration in a confined space, become so virulent as to produce it; and the breath of a sick person, or an emission of poisonous gas from an open drain or cesspool, or any mephitic vapours floating upon the atmosphere, and entering into the circulation, may cause Fever, one of those efforts of nature to rid herself of deleterious matter, which if suffered to remain would cause organic disease; and this effort is more or less severe, according to the strength of the enemy to be expelled, and the vigour of the patient's system.

Fevers may be either *Idiopathic*, that is of the general system, not depending upon local disease; or *Sympathetic*, or as it is sometimes termed *Symptomatic*; which is a secondary affection, resulting from local disease, such is the inflammatory form; there is also what is called a *remote* effect, viz., the Hectic Fever. Then, again, they are distinguished as 1st, *Continued*, which includes the ordinary Fever of this climate, which in its active stage is sometimes attended with bilious vomiting, and diarrhoea; then, in some cases becomes typhoid, and lastly, assumes the slow nervous form. Under this head, too, must be classed the terrible Typhus or Malignant Fever, sometimes also called the Camp, Hospital, Gaol, or Prison Fever, of which, as of the others, we shall

have to speak more at large presently. 2nd, *Intermittent*, or *Ague*, (which see). 3rd, *Remittent*, having irregular periods of remission and exacerbation, instead of distinct intervals and paroxysms, between which the patient is commonly well enough to go about his ordinary occupations. We also speak of *Eruptive* fever, meaning those that throw out a rash or eruption, such as measles and small pox, and distinguish the different kinds by several other names, as Gastric Fever, a term first applied to the common continued sort, when attended by unusual gastric derangement; this has been termed the Choleric and Mesenteric Fever; Hay Fever, or Hay Asthma (*Catarrhus Æstivus*), and Hectic; Habitual, or Protracted Fever; Child-bed, Peritoneal or Puerperal Fever, the epidemic disease of lying-in women; Yellow, Kindal's, Bilious, Remittent, or Balam Fevers, (see *Bile*.) Many other distinctive terms applied to certain Fevers might be adduced, but it would answer no useful purpose to give the names of them here. We now proceed to give an account of the most common forms of febrile diseases, confining ourselves to the Idiopathic or true Fevers, as the Sympathetic are spoken of under the heads of the various diseases of which they are the symptomatic accompaniments. 1st, then, of the Continued Fevers, we have the simple or ephemeral form, whose precise *symptoms* are usually hot skin, head-ache, frequent pulse, furred tongue, disagreeable taste in the mouth, pains in the back and loins, shivering, and loss of appetite; there is not commonly much thirst, nor are the symptoms very severe, nor the fever of long duration. A mild diaphoretic *treatment* is all that is required; this will bring on, if it does not come naturally, a profuse perspiration in the course of a day or two, which relieves the system, and leaves the patient only a little weakened, with, perhaps, a slight cough, and running at the nose. This is generally the result of a cold, caught by sitting in a draught, or exposure to wet, or of contagion, the disease assuming an epidemic character, and running into *Influenza* (which see), or the complicated Continued Fever called *Typhus*, and other names as already mentioned. In this, we have the above symptoms in a much greater degree of intensity, and others, which vary considerably in the different stages of the disease. Of these stages there are three pretty distinctly marked: 1st, the Premonitory, or Incipient stage, in which there is commonly restlessness, loss of appetite, a pale, shrunken, anxious countenance, an unpleasant breath,

a furred tongue, which, when put out for inspection, indicates by its tremulousness the weak state of the muscles generally. Frequently an attack of this disease is so insidious that the patient is scarcely aware of its first approaches; there is, perhaps, languor and an uneasy feeling, which is attributed to indigestion; but these symptoms should always be viewed with suspicion, especially if there is typhus in the neighbourhood. The second stage is that of Reaction, in which the febrile symptoms become stronger and more marked, the heat of the skin is greater, the pulse quicker, especially towards night; there is more thirst, head-ache, flushing of the face, and throbbing of the arteries of the head, suffusion of the veins of the eyes, and a tendency to delirium, all showing increased action in the cerebral circulation, which is likely to lead to congestion or inflammation, it may be of the brain, lungs, or bowels; in the first case the delirium will run high, and there will be great disturbance of the nervous system, and consequently of the functions generally; in the second there will be rapid and difficult breathing, with cough and the other symptoms of pulmonary inflammation; in the third there will be diarrhoea and flatulency, with first yellow, then black, and ultimately bloody motions, the result of hæmorrhage, which, if severe, will carry off the patient rapidly. In this stage of the Fever, as it progresses, we see frequently an eruption of bluish red spots on the skin, caused most likely by the rupture of the smaller vessels, and now, too, the tongue becomes coated with a yellowish fur, which first is dry and brown down the middle, and then is gradually overspread by a hard dark coating. This brings us to the third, or Typhoid, stage of the disease, in which the patient is completely subdued, his muscular strength is gone, his senses no longer serve him at all, or do so in a very imperfect manner, and his mind is incapable of any connection of thoughts or ideas; the *feces* pass involuntarily, and the highly coloured urine either dribbles out in small quantities, or is retained altogether; the pulse, although frequent, becomes more and more feeble; a brown fur, called *sordes*, collects about the teeth and lips; and the hurried irregular respiration, shows that the last struggle with the destroyer has commenced; soon the fingers begin to twitch nervously, and to pick at the bed-clothes, and the body, as if obeying some law of gravitation, has a singular tendency to hitch down to the bottom of the bed; the eyes are probably wide open, and so remain day and

night, but there is no speculation in them ; then mucus collects in the throat and air-tubes, causing the sound known as the "death rattles ;" and the patient dies of suffocation, one of the many victims of Typhus Fever, unless he should, by the aid of a good constitution and a skilful physician, under God's providence, be enabled to escape this great peril. In that case, he will, after lying for some days in an apparently hopeless state, experience a mitigation of his severe symptoms ; refreshing sleep will once more close his aching eyelids ; a profuse perspiration will break out all over his hot parched skin ; his breathing will become less hurried and difficult ; the convulsive twitchings will cease, and he will lie calm and quiet—in a state of utter prostration, it is true, but so easy, that his condition, compared with what it was only a few hours since, will seem like that of one in eternal rest. This is a very critical period of the disease, requiring, perhaps, more careful and judicious treatment than any other : the all but extinct spark of life has shot up into a feeble blaze, and a very little gust will suffice to quench it utterly ; it must be carefully guarded and nourished, until it grows brighter and stronger, and is again able to bear the blasts and buffetings of active existence. But let us proceed regularly, and detail the mode of *treatment* necessary through all the stages of the Fever above described : and much of this will be applicable in most forms of febrile disease, the duration of which, it should be borne in mind, cannot be shortened ; there is a certain course for it to run, and the main object of all remedial measures should therefore be, to assist, as much as possible, the constitutional powers of the patient in this effort to overcome the effects of the poison which has entered into the system. To this end, as soon as the premonitory symptoms are observed, an inquiry should be instituted into the various organs, whose unimpeded operations conduce to a healthful condition of existence ; if there be any functional derangements, any deficiency, or otherwise, of secretions or excretions, they should at once be attended to, and the medicines necessary to produce an alteration in their character or quantity, at once administered ; above all, let the patient have pure air, and plenty of it ; let him have cleanliness and quiet ; keep him, as much as be, from all disturbing influences ; let him have plenty of simple diluent drinks ; there is nothing better than cold Toast-and-Water, or Barley-Water, with, perhaps, a little Lemon-juice in it : if nourishment is required, it should be given very moderately, and consist chiefly of Milk

and farinaceous diet ; such fruits as Currants, Grapes, Oranges, and Strawberries, may be given if they do not create flatulency and diarrhoea ; but nothing prepared from meat, nor of a stimulant nature, except in low Nervous Fevers, and the later stages of Typhus, and some others, in which there is danger of the patient sinking from exhaustion. When there is much heat and dryness of the skin, sponging, once or twice a day with cold water will be refreshing and beneficial, and this may be resorted to with advantage in nearly all cases of Fever. After the administration of a gentle aperient, combined with some mild mercurial, to operate upon the bowels and liver, the skin and kidneys should be acted on by diaphoretics, combined with diuretics, in some such form as this : Nitrate of Potash, 1 drachm ; Tincture of Hyoscyamus, 2 drachms ; Sweet Spirits of Nitre, 3 drachms ; Liquor of Acetate of Ammonia, 1 ounce ; Camphor Mixture, sufficient to make 8 ounces ; take two table-spoonfuls three times a day. Scidlitz Powders are also good, especially if there is a tendency to constipation ; if it is otherwise, Soda Powders may be given occasionally with 20 drops of Tincture of Ginger, in each, if there is flatulency. The hydropathic treatment has been resorted to with great success in the treatment of Simple Continued Fever, but it can scarcely be properly carried out except at the regular establishments. Such are the aids to nature which may be safely recommended in the early stages of nearly all Fevers ; in the second or reactionary stage, however, of that which we have been describing, when complications begin to arise, it will be necessary to modify the treatment according to the circumstances of the case, although the same general principles must be kept in view throughout. Thus, if there is cough and difficulty of breathing, a blister on the chest may be desirable ; if there is tenderness of the bowels on pressure, half a dozen leeches should be applied ; if there is diarrhoea, it must be checked by the medicines named under that head ; if constipation, Castor Oil, Rhubarb, or Senna should be administered, or aperient injections thrown up. Congestion or inflammation of the brain, or any other organ, may call for topical or general bleeding ; it was at one time thought that no inflammatory fever could be reduced without this latter mode of depletion, and much mischief has resulted from the free use of the lancet in this as in many other forms of active disease ; yet there can be no question that where the febrile symptoms run high, and

the patient is of a full habit and vigorous constitution, bleeding from the arm in this case is very serviceable. Cold applications to the head, if there appears danger of cerebral congestion; hot bran bags to the abdomen if the urine is scanty or altogether retained; sleepless nights, and convulsive starting and twitching may require opiates, but these should always be administered with caution, on account of the way in which they sometimes affect the brain.

Such is an outline of treatment of Fevers in general, and of the two first stages of common Fever in particular. When it assumes the typhoid character the treatment becomes more difficult; then, more than ever, it is necessary that the patient's body and mind should have perfect rest: no attempts should be made to shorten the duration of the disease, especially by lowering the system, as the time will surely come when all the physical energies will be required to recover the patient from the state of exhaustion to which he has been reduced.

We generally look for the typhoid symptoms at about the end of the second week of the Fever, and as soon as they appear, we commence strengthening the system for the great trial it must sustain, by all the means in our power, having, however, a due regard to local congestions, and other complications, which may present themselves. If the brain is not too much affected, we at once resort to stimulants, such as Brandy or Port Wine, the latter mulled, with a grain or two of Quinine in each dose of half a wineglassful two or three times a day; if there is much cerebral excitement, we give Ammonia, the Carbonate, 5 grains, or Aromatic Spirit 10 drops, in one ounce of Decoction of Bark three times a day; also Beef Tea in small quantities frequently. It is the rule in most diseases to wait for a clean tongue, and moist skin, before we administer tonics and stimulants; but, in this, we should often lose our patients if we did so: very commonly we administer these even when we know Pneumonia or Bronchitis are present, overlooking the lesser for the greater danger: besides which, it is by no means clear that the stimulant method of treating Pneumonia is not the most successful, at all events we have found it so. Sulphate of Quinine, 1 grain, with 10 drops of dilute Sulphuric Acid, in 1 ounce of Infusion of Roses, is a good form of tonic; its acidity, too, renders it pleasant and refreshing to the fever-stricken. When the debility is extreme, Brandy and Port Wine, in equal proportions, a wineglass together may be given; we have known a patient take as much as two bottles

of the latter in a day. It is sometimes necessary to give nutrients and stimulants in very small quantities—the power of swallowing being nearly lost, a teaspoonful of Port Wine, thickened with Arrowroot, every quarter of an hour or ten minutes; or of Beef Tea, with a little Brandy in it; in this case, too, a Beef Tea elyster may be used with advantage. When, as is often the case, there is paralysis of the bladder, so that the urine does not pass off, a catheter must be used. It is necessary to pay particular attention to the back and other parts of a typhus patient, as troublesome bed-sores frequently occur; the use of the water-bed will generally prevent this, should it not, the remedies mentioned under the head of *Bed-sores* must be employed. As the typhoid symptoms disappear, and convalescence becomes fairly established, the greatest mischief is to be apprehended from an indulgence of that craving for solid food and stimulant drinks which is experienced by the patient; he longs for Chops and Steaks, Oysters, and Ale, he is sick of Arrowroot, and Beef Tea, and all kinds of “slops,” and becomes quite angry that he cannot have some change of diet; he wants something solid to eat, now that he has an appetite for it; but a judicious nurse will deny him this gratification for a time; light puddings of Arrowroot, Ground Rice, Sago, Semolina, or Tapioca, may be first ventured on; and when the tongue is quite clean, and all febrile symptoms have disappeared, a beginning of meat diet may be made with a small slice of chicken, and if this agrees with the stomach, there may be a gradual advance to stronger meats, with wholesome white kinds of fish for an occasional variety. It is likely that tonics may be required for a considerable time after the patient is convalescent, and as soon as there is sufficient strength for the journey, it is desirable that he should have a change of air, especially if the same local influences are still in operation by which the disease was first induced. We should have mentioned above, that in cases of Fever of a low malignant kind, fresh Yeast, in teaspoon doses, given every three or four hours, has been found very beneficial, and that through the whole course of the disease, disinfectants, such as the Chloride of Lime or Zinc, should be freely used.

We have next to speak of the Periodic Fevers, divided into Intermittents and Remittents, the first, including the various forms of *Ague* (for particulars of which see that head); the second, differing therefrom in having but imperfect remissions of its symptoms, with no decided intervals of en-

tire relief ; this partakes somewhat of the character of both Continued and Intermittent Fever, and forms as it were a link between the two ; it attacks both old and young, but has not quite the same characteristic in the former as in the latter ; it will, therefore, be convenient to describe it under two heads, and, first as *Adult Remittent*, sometimes called *Gastric*, or *Bilious*, or *Yellow Fever*, the latter being its most intense and dangerous form, in which it is seldom or ever seen in this country, full particulars of symptoms, treatment, &c., of this Fever in its several manifestations are given under the head *Bile* ; we therefore pass on to consider *Infantile Remittent*, sometimes called *Infantile Hectic*, *Stomach*, or *Worm Fever* : this attacks children of all ages up to 10 or 12 years ; it is characterized by fetid unhealthy motions, pain in the abdomen, variable appetite, a furred but moist tongue, a generally weak and irregular pulse, varying from 90 to 150, and upwards. There is generally head ache and drowsiness, indicating cerebral disturbance ; the child sleeps much, but not soundly ; it moans and talks incoherently, and starts at the slightest sound ; there is generally flatulence, causing great distension of the abdomen ; often cough with difficult respiration. There is usually, in this Fever, periodic paroxysms and remissions, sometimes daily, sometimes twice a-day, and occasionally three times, the one at night being the longest and most severe. The approaches of this disease are gradual, and for a time almost imperceptible ; there is a loss of appetite, flesh, and spirits, which the mother does not at first notice, or if she does, attributes it to a disordered stomach ; then the countenance becomes pale, and has a worn, anxious look, with, perhaps a hectic spot on either cheek, appearing and disappearing with the paroxysms of fever, which now begin to be distinctly marked, as do the symptoms above enumerated. The weak and listless child is not, perhaps, for a long time confined to its bed, but it lolls and lies about, and doses and wakes with a start, and moans and complains fretfully, picking its nose and fingers, and exhibiting other signs of debility and nervous irritations ; there is no great thirst, the bowels are often obstinate, and the motions, when they do occur, are of an unhealthy character, slimy, and deficient of bile ; the urine is thick, dark coloured, and scanty, and so the disease goes on until the patient sinks exhausted, or else the bad symptoms gradually abate, and a recovery takes place, brought about perhaps in a great measure by a judicious course of treatment, which will vary somewhat in ac-

cordance with the constitution of the child, and the exciting cause of the disease ; if it can be traced to an excess of rich or unwholesome food, the proper course, if the child is sufficiently strong to bear it, is to administer first an emetic, and then an active purgative, including some preparation of Mercury ; after this, effervescing draughts, rendered palatable by Syrup, which may be given two or three times a-day, and continued as long as the febrile symptoms do not abate, especially if there be nausea, amounting to a desire to vomit. If, as is sometimes the case, the Fever arises from obstinate constipation, the mercurial purgative should be repeated every day until the bowels are freely opened, and then for a time every other, or every third day. Sometimes the irritation is set up by teething, and then there is generally diarrhœa, which it is never well to stop too suddenly ; when, however, this is found to be weakening the system too much, and keeping up the irritation, a common Chalk Mixture with about 5 grains of Aromatic Confection in each dose of about a tablespoonful, may be given. Should this not have the desired effect, and serious inflammation in the bowels ensue, Mercury and Opium in very small doses may be tried : of the grey Powder 2 grains, or Calomel, $\frac{1}{2}$ a grain, with 1-6th of a grain of Opium, administered every 4 hours, until the desired effect is produced, or 12 of the powders have been given ; beyond this it is not safe to go, except it be under the direction of the medical man, whom the prudent mother will do well to consult as soon as the disease has shown itself ; it will be better to trust to nature, aided by such remedial measures as common sense suggests, than to go beyond the remedies here prescribed. The fever will have its course, be the measures adopted what they may, and if the child has a good constitution he will most likely recover eventually, although he will be greatly weakened by the attack ; the great principle of the treatment, in this as well as in all Fevers, is to watch the symptoms carefully, and guard against inflammation seizing upon any important organ ; to keep the system in such a condition as to render it least liable to inflammatory action ; to support the strength when needed, and to aid nature by all possible means in her efforts to restore the system of the patient to a healthy condition.

Hectic Fever, which belongs to the class of remittents, is characterised by slight shiverings succeeded by flushings, which are generally accompanied by that bright red spot on each cheek, which is so marked

a symptom of the disease ; profuse and exhausting perspirations follow the hot stages. There are usually two paroxysms in the 24 hours, one commencing about noon and lasting three or four hours, and the other coming on at 10 or 12 at night, and continuing until 2 or 3 o'clock in the morning. At first between the attacks there are complete remissions of the bad symptoms, the patient is tolerably cheerful, and takes his food with an appetite ; but, gradually, the paroxysms become longer and more severe, the sweats more excessive, and complete prostration ensues ; death being commonly hastened by the setting in of diarrhœa. Local irritation of some kind is always the *cause* of this disease ; it may be of the lungs, as in consumption, in the latter stages of which the hectic flush is nearly always present ; or it may be of the hip joint, or of some other part where there is extensive suppuration of the tissues, and formation of matter. The *treatment* here must depend very much upon the cause. (See *Abscess*, *Consumption*, *Hip-joint*). For the colliquative sweats and diarrhœa, there should be an administration of *Astringents*, (which see) and *Diarrhœa*. It sometimes happens that there is no apparent disease to which the hectic symptoms can be attributed, it would therefore appear to be the result of debility ; in this case the *treatment* should be much the same as that proper for an intermittent fever ; tonics, with a light nourishing diet, chiefly Milk, easily digested vegetables, and farinaceous compounds.

We now come to *Eruptive Fevers*, which are characterised by the before-named general febrile symptoms, more or less severe, followed by an eruption sufficiently distinctive in each case to determine the name of the disease. As a rule these only occur once in the life of an individual : particulars of them will be found under the several heads of *Small-pox*, *Cow-pox*, *Chicken-pox*, *Measles*, *Scarlatina*, *Plague*, *Miliary Fever*, the latter of which may be regarded as rather symptomatic of some other complaint than as constituting a disease of itself. (For other forms of febrile disease, see the various heads already referred to).

Before quitting this subject, we would impress upon our readers the necessity there is of obtaining professional advice in all cases of Fever, whose forms are so various, complications so great, action frequently so rapid, and effects so fatal, that it is impossible for one, unpractised in the diagnosis of diseases, and unskilled in its treatment, to distinguish the several varieties, and determine on the proper treatment.

FIBER. The Latin name for the Beaver ; an animal which supplies the substance called *Castor* (which see).

FIBRE. (Latin, *fibra*, a filament.) This may be either animal or woody, the latter constituting the fibrous structure of all vegetable substances ; but it is with the former only that we have here to do ; that is, the collection of filaments which compose the muscular fasciculi, &c., of the human body, and constitute what is called the Fibrous System ; this is capable of division into membranes and organs, the former being, 1st, those which cover certain organs, and contribute to their texture, such as *Periosteum*, which covers bone ; the *Perichondrium*, which covers cartilage ; the *Dura Mater* ; the *Tunica Albuginea*, and the proper membranes of the *Kidneys* and *Spleen*, &c., (all of which see). 2nd, the *Fibrous Capsules*, or cylindrical bags found around some of the osseous articulations, such as those of the *Humerus* and *Femur*, (which see). 3rd, the *Fibrous Sheaths*, which confine the tendons in their situations, especially in passing over the bones, where they are much inflected, as in the fingers and toes ; some of these sheaths confine a number of tendons, as the wrist and instep, and some only one or two, as in the fingers. 4th, the *Aponurosis*, a kind of fibrous canvas, sometimes forming coverings for different parts ; at others, furnishing muscles with points of insertion.

The *Fibrous Organs* are, 1st, those found at the extremities, or in the centre of muscles ; they are either simple, like a single extended thread, or compound, as in the *Femoris*, *Flexus*, *Rectus*, &c. ; (all of which see). 2nd, the ligaments, which secure the articulated joints, around which they are placed ; they are formed of regular fasciculi (little bundles), as those of the elbow, jaw, knee, &c., or of irregular fasciculi, as those of the rib, pelvis, &c.

FIBRIN. A tough fibrous mass, which, together with albumen, forms the basis of muscle ; it is identical in composition with albumen ; but, when digested in the stomach, is better fitted for becoming incorporated with the bony tissues, and, therefore, contributes a larger amount of nutrition. In the muscular tissues of man, and other animals, Fibrin is present in a solid state ; it is also present in the blood, in the shape of fine filaments, enclosing the red globules, and, together with them, forming what is called *Clot*, or *Crassamentum* (which see), and *Blood*.

FIBRO-CARTILAGE. The substance which constitutes the base of the ear, determining

the form of that part, and also which composes the rings of the *Trachea*, *Epiglottis*, &c. (which see), and *Ear*.

FIBULA. (Latin for a clasp.) A term applied to the lesser bone of the leg, and also to a curved needle used for sewing up wounds: the designation of the external popliteal or peroneal nerve, and the lymphatic arteries, &c., therewith connected, is *Fibular*.

FIGUTIO, or FIGUS. A fig-like tubercle about the anus, or pudenda. (See *Sycosis*.)

FIDGERS. A state of general restlessness, and desire for change of position; the term is probably a corruption of *fugitive*. See *Titubatio*.

FIFTH PAIR. A term applied to the trifacial nerves, which are the largest of the brain. See *Nerves*.

FIGS. (Latin, *Ficus*.) The fruit of the *Ficus Carica*, which comes to perfection chiefly in hot climates; the pulp is wholesome, and somewhat aperient, but the tough skin is indigestible, and should not be eaten by those whose organs of digestion are at all weak. Children who are subject to consti-



pation, may take the pulp with advantage. Green figs, as we call those which grow in this country, are more laxative than the preserved ones from abroad, but they have a mawkish, and, to most persons, an unpleasant flavour. The finest foreign figs come from Smyrna, and other parts of Turkey; if good, they are large and plump, not shrivelled and leathery, as those in the

shops too frequently are, being in this state very unwholesome. Figs are sometimes used externally, boiled in milk, or roasted; they are applied to boils and small abscesses, to promote suppuration; in this way they are particularly applicable to gum-boils. They are also an ingredient in the compound Decoction of Barley and Confection of Senna. In the following combination, they make a good demulcent gargle for inflammatory sore throat:—Mallow Roots, 1 ounce; or if these cannot be obtained, Linseed, 1 ounce; to 2 or 3 figs, split open; Water, 2 pints; boil to a pint, and strain.

FILAMENT. (Latin, *filum* a thread.) A small thread like structure, or *Fibre* (which see).

FILBERTS. The fruit of a variety of the *Corylus Avellana*. The term was originally applied to all nuts with very long husks; but of late the varieties have become so numerous, that this distinction has ceased to be regarded, and nut and filbert have become almost synonymous terms, except that the wild, uncultivated hazel nut, and



those varieties which nearly approach it in form, are never called filberts, the eating of which, except as an occasional luxury, we would warn our readers against; like all nuts, they are very indigestible; perhaps now and then, with a glass of good port or sherry wine, and a little salt (*cum grano salis*), they may do no great harm, but it would be exercising a sound discretion not to eat them at all.

FILIFORM (Latin *filum*, and *forma* likeness). Thread-like; applied to the papillæ at the edges of the *Tongue* (which see).

FILM. A popular term for opacity of the cornea. See *Eye*, *Leucoma*.

FILTRATION. (Latin, *filtrum*, a strainer). The straining of fluids through paper, linen, sand, &c., for the purpose of purification; the strainers are termed *filters*.

We extract from a very useful little work, entitled *The Practical Housewife*, the following clear and simple directions on this head:

“The operations of straining and filtering are frequently required in domestic manipulations, and the apparatus employed usually consists of sieves, and a jelly bag. As in many other instances, it will be found advantageous to import several contrivances from the laboratory to the kitchen. One of the most useful (because most simple) strainers consists of a square frame, formed of four pieces of wood nailed together at the corners, with a piece of calico, linen, or canvas, of suitable fineness, tacked to the four sides. This strainer is particularly useful in separating any solid substance—as the residue in making wines; or if grated potatoes are put on one made of coarse cloth, the starch can be readily washed through, leaving the useless portion on the strainer; the cloth should not be tacked very loosely, as it bags down when any substance is put on it, and the liquid runs away below from the centre. This strainer is a most useful one; it is readily made, of any degree of fineness, and of any size; and it also possesses the great advantage, that, if necessary, the tacks fastening the cloth can easily be withdrawn, when the substance remaining can be rolled up in the cloth, and tightly squeezed, to express the last portions of liquid, which are frequently the most valuable.

In cases, where a finer filtration is required than can be obtained by means of a cloth, as in cleaning turbid wine or spirit, the use of filtering paper is recommended. This paper is merely a stouter kind of blotting-paper, thick varieties of which answer very well for domestic purposes; it is most simply used by taking a square piece, folding it into half—by bringing the two opposite edges together—and then folding the oblong so obtained across its length. By this means, a small square is obtained, one quarter the original size, which may be opened into a hollow cup, having three thicknesses of paper on one side, and one on the other; this is to be placed, with the point downwards, in a funnel, and the liquid poured in; and as soon as the pores of the paper are expanded by the moisture, it will be found to flow through perfectly clear. Care must be taken, in making the filter not to finger it much where the two foldings cross each other, as a hole is readily made at that

part, and the filter spoiled. The objection to this simple contrivance is, that from its flat sides applying themselves closely to those of the funnel, the flow of the liquid is impeded, and is therefore slow. This effect may be obviated by the use of the plaited filter, the construction of which we will endeavour to describe. A square piece of filtering or stout blotting-paper, is to be doubled, and the oblong so obtained is to be again folded in half, when, if the last fold is opened, it will have the appearance of fig 1. From the corners *b b*, folds are to be creased in the direction towards *a*, but not reaching it for half an inch; these are indicated by the dotted lines, which divide

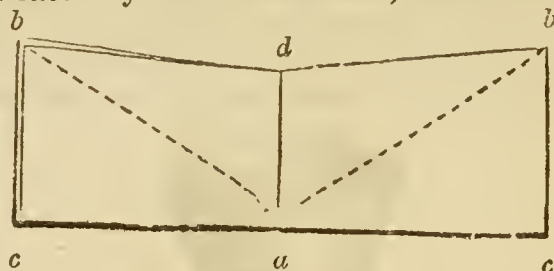


Fig. 1.

the double paper into four triangles, each of which is to be again folded into eighths; and care must be taken that all the folds are made the same way, that is projecting to the same side of the paper. When complete, the doubled and creased paper will appear as fig 2. Now divide each eighth into half,



Fig. 2.

by a fold in the *opposite* direction to those previously made, when it will be found that the whole will readily fold up like a paper fan. The projecting loose ends which are formed by the corners *b*, should be cut off, and the double sides separated for the first

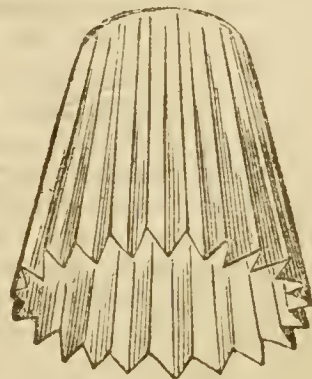
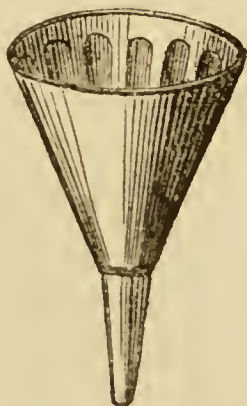


Fig. 3.

time, by blowing them apart, when the whole may be readily opened out as in fig 3.

In making this filter, which takes a much less time than to follow the description, two precautions are requisite. The folds should be made at once with one firm pressure, and not with a series of rubbings; and all the creases should stop short of the middle, otherwise a hole will be made at that point long before the filter is completed. The advantages of this filter are, that it exposes a large surface for the liquid to pass through; and from its only being in contact with the funnel where the angles project, the current flows away readily."

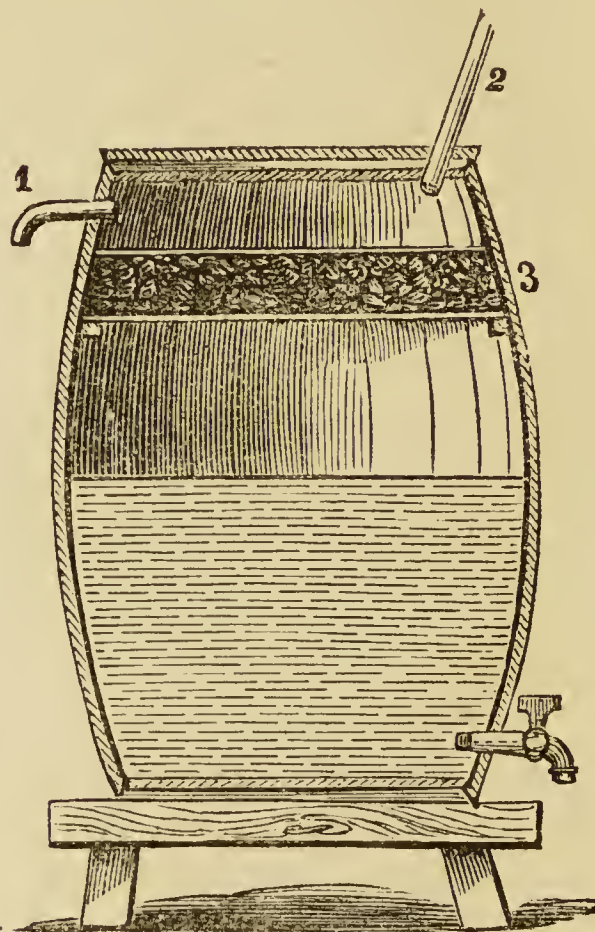
We should add to this, that the funnel into which the paper is put, should be of glass or porcelain—the composition known as Wedgewood ware, is as good as any—and ribbed on the inside, as represented in the diagram. As a small amount of impurity



generally passes through with the first two or three ounces of the fluid, it is best to let that quantity run through a second time.

As the purity of the water used for drinking purposes, is of great importance in a sanitary point of view, we would recommend in all cases, where that cannot be obtained fresh and clear, that some kind of filter should be used. Various contrivances for this purpose, are in vogue, the one represented below, is as simple and efficacious as any:—"Get a barrel of any size required, an earthen one is best, insert near the top a short pipe with a downward curve (1) for the overflow of water; it must, of course, have a cover, and at the side of it, furthest from that of the barrel where this pipe is inserted, make a hole sufficiently large for the larger supply pipe (2), to go in: at about a quarter of the depth of the barrel there should be a ledge for the frame or false bottom of the filter to rest upon; this should be a stout plate of zinc pierced with small holes, and on it should be laid, first, two inches in depth of clean pebbles, on these two inches of well-washed sand, above this two inches of powdered charcoal and then two inches of

stones, sufficiently large to retain their position when the water flows in: these several layers must be renewed occasionally, as they will become filled with impurities which they retain; if the barrel stands on



a block in some convenient place the water can be drawn out as it is required for use. Another and simpler plan is that recommended recently in an account of the *Proceedings of the British Association*.—"Take any common vessel, with a hole at the bottom, such as a flower-pot, fill the lower portion with coarse pebbles, over which place a layer of fine ones, on these a layer of clean coarse sand, and on that again a piece of burnt clay, perforated with small holes, and on this a stratum 3 or 4 inches thick of well-burnt powdered charcoal: hang it over, or let it rest on, some fitting receptacle, pour water in at the top, and it will percolate through the strata of the filter, and come out perfectly pure through the hole in the bottom. This will shew the principle on which Filters are constructed, and enable any ingenious person to make one according to his requirements. See *Charcoal, Water*.

We may add to these two other contrivances for water filtering, which appear to combine simplicity with utility. Fig. 1 is a square box of slate or other material,

divided by a partition and horizontal layers of filtering material ; the side is supposed to be taken away to show the interior. The water is poured into *b*, and passes through

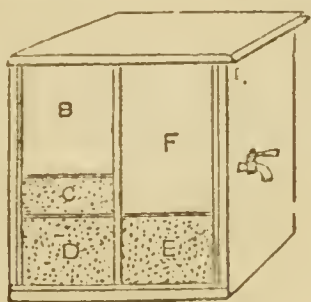


Fig. 1.

c, *d*, and *e*, and rises into *f*, from whence it is drawn bright and clear by the tap. It is the invention of Stirling, New Oxford Street, London. Fig. 2 is a filter of a different kind, or water-purifier, as it is called by the

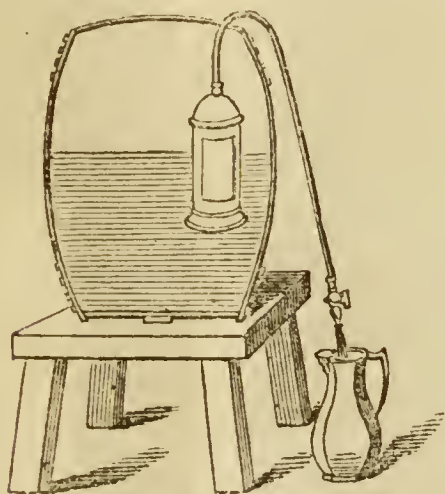


Fig. 2.

inventor, Bird, of Birmingham. The strainer is plunged into the water, and by means of a syphon-tube, with which it is connected, the water flows from the cask or vessel in which it is placed, quite fit for drinking. Both these filters were shown in the Great Exhibition.

FILTRUM. The superficial gutter along the upper lip, from the partition of the nose to the top of the *Lip* (which see).

FIMBRIA (Latin for a fringe). The fringe-like extremity of the Fallopian Tube; (see *Uterus*).

FINGERS. As the form and construction of these will be described fully when we come to treat of the *Hand*, we need not enter into the subject here, nor need we say much of the injuries to which the fingers are liable, as these are spoken of under the head of *Cuts*, *Dislocations*, *Fractures*, *Nails*, *Whitlows*, &c. The only directions which we shall now give are those for the removal of a ring which has become fixed on the finger from the swelling of the skin or joint;

the first plan to be tried is to dip the finger in cold water, and rub it with soap ; should the efforts to slip off the ring not be successful, try this plan—Take a piece of strong pack-thread, or fine twine, and beginning at the top, wind it gradually and evenly round the finger until the ring is reached, under which the end should be slipped, then taking a firm hold of the end, begin to unwind the pack-thread, and the ring will generally come off with it. Should this be unsuccessful, the ring must be cut through by a fine file, or a pair of cutting pliers, a piece of thin metal being first inserted to prevent injury to the skin. If the ring is allowed to remain on, it is very likely to cause inflammation, and perhaps the loss of the finger.

FIRE. As the *Family Doctor* must be, to a certain extent, a domestic economist, we do not think it out of our sphere to give a little plain advice about fires and fire-places, and first let us say that, for health as well as comfort, there is nothing like an English coal fire, in an open stove. As for those close contrivances in which we see nothing but a sort of magnified pepper, or salt-box, painted black, we cannot hold with them, they are not healthy, and they are not comfortable; but, on this head, we shall have more to say when we come to speak of stoves, at present our attention must be confined to fires and fire-places : by all means we say, then, let it be a coal fire, kept brightly burning, by adding a few coals at the time, and frequently, and not placed too high from the floor, as if it is, a great part of the heat goes up the chimney, instead of being diffused through the room ; the bottom bar should not be more than five or six inches from the hearth. See *Grate*, *Stove*.

We extract from one of Messrs. Ward and Lock's "Handy Books," entitled *How to Furnish a House, and make it a Home*, the following practical suggestions on the subject before us:—

"Although a large open fire-place helps in keeping a room ventilated, it is objectionable because of the draughts which it creates. In old-fashioned houses, people are obliged to use screens, and many other contrivances, to shelter themselves from the currents of air which come from all quarters, to give stiff-necks, ear-aches, and other unwelcome twinges to those who sit near the great cavern called a fire-place, where they are scorched on one side, and frozen on the other. With such arrangements, a room never can be warm, because the air rushes away so fast that the walls have never time to get heated, and at a distance from the fire are as cold as out of doors.

"A good deal of the inconvenience of smoke might be avoided by the proper management of a fire. Count Rumford observes—'Nothing can be more perfectly void of common sense, and wasteful and slovenly at the same time, than the manner in which chimney fires, and particularly where coals are burned, are commonly managed by servants. They throw on a load of coals at once, through which the flame is hours making its way; and frequently it is not without much trouble that the fire is prevented from going quite out. During this time no heat is communicated to the room, and what is still worse, the throat of the chimney is occupied merely by a heavy dense vapour, not possessed of any considerable degree of heat, and consequently not having much elasticity. The current of warm air from the room which presses into the chimney, crosses upon the current of heavy smoke which rises slowly from the fire, obstructs it in its ascent, and beats it back into the room; hence it is that chimneys so often smoke when too large a quantity of fresh coals is put upon the fire. So many coals should never be put upon the fire at once as to prevent the free passage of the flame between them. In short, a fire should never be smothered; and when proper attention is paid to the quantity of coals put on, there will be very little use for the poker; and this fact will contribute very much to cleanliness, and to the preservation of furniture.

'Those who have feeling enough to be made miserable by anything careless, slovenly, and wasteful, which happens under their eyes,—who know what comfort is, and consequently are worthy of the enjoyments of a *clean hearth* and a *cheerful fire*, should really either take the trouble themselves to manage their fires, (which, indeed, would rather be an amusement to them than a trouble), or they should instruct their servants to manage them better.'

"These sensible observations were written nearly sixty years ago, but they are just as valuable now as they were then. The Count devoted much attention to household economy generally, and as we know of no better plans for curing or preventing a smoky chimney, and saving fuel than his, we shall endeavour to give such a simple account of them as will enable any working bricklayer or mason either to build a new chimney properly, or to alter an old one on correct principles.

"Generally speaking, it will be necessary to diminish the opening of the fire-place—that is, to make it smaller; and to fix the

grate more forward and less high than has been the practice. Sometimes a straight stone slab placed all across under the mantel, or a row of bricks supported by a flat iron bar, will be sufficient to effect a cure; for this lowers the breast of the chimney, and diminishes the size of the opening of the fire-place. The breast of a chimney is that part against which the mantel is built, and a good deal depends on the way on which this is finished on the inside.

"Then, if we wish smoke to ascend easily, we must place the throat, or lower part of the chimney, immediately over the fire; the back of the fire-place also should be built perpendicular. There is no more reason why smoke should refuse to ascend a properly-constructed chimney, than that water should refuse to descend through a pipe.



Fig. 1.

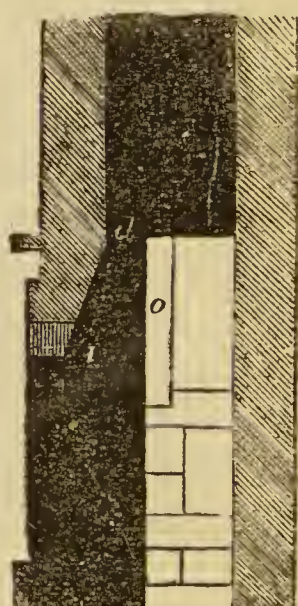


Fig. 2.

And it will be seen from the diagrams that these improvements can be made with but a small amount of trouble.

"Figure 1 shows a fire-place and part of the chimney, as usually built; an opening



Fig. 3.

with square sides, in which the grate is fixed so far back that most of the heat is lost. The depth, however, from back to

front should not be more than from 9 to 13 inches; the back is, therefore, to be built up, as shown at figure 2, and in the ground plan, figure 4. It will be seen that the chimney breast has a small piece added to lower it.

"Figure 4 represents the ground plan of the fire-place in figure 1; but instead of square, it is to have sloping sides, and is to be filled up as in figure 4. To do this according to rule, a line A, B, is to be drawn

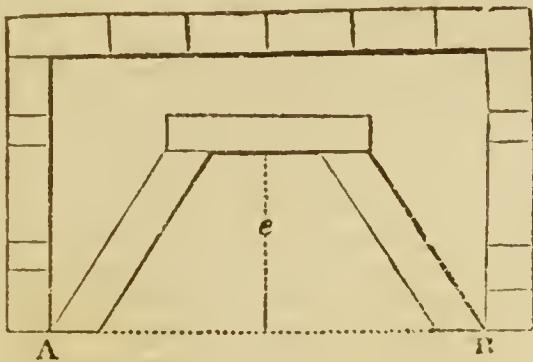


Fig. 4.

straight from one jamb to the other; and from the centre of this, a cross line *e* is to be drawn from front to back. The mason is then to hold a plumb-line against the inside of the chimney breast, where it begins to run straight upwards, as, for example, at *a*, figure 1, and the spot where the plumb-line rests on the cross line *e* is to be carefully marked. Four inches behind this mark is the position of the back of the fire-place, as shown by the brickwork in figure 2, which, by being so placed, gives four inches as the dimensions from back to front of the throat of the chimney seen at *d*.

"This brickwork, and the sides, are to be carried up from six to nine inches above the lowest part of the chimney breast, so as to give a sufficient length and form to the throat *d*; and instead of being finished irregularly, or with a slope at the top, it must be perfectly flat and level; because when the wind sets down the chimney, if it strikes against a slope it drives the smoke into the room, but not if it strikes upon a flat. Too much pains cannot be taken to make a good finish of the inside of the breast; it should be quite smooth and perpendicular, so as to offer no impediment to the ascent of the smoke. The lower part is to be carefully rounded off with plaster, as at *i*, figure 2, instead of being left square or rough and badly finished, as it nearly always is.

"The way to fix the sides or coverings of the fire-place is at a slope or angle, as shown at figure 4. It has been found that an angle of 45 degrees is that which throws

the most heat into the room. These angles and the back should be made of fire-brick, and if each of one piece the better, as it will then be easy to place them in the position represented in the diagram. The hollow spaces behind may be filled up with regular layers of brickwork, all brought to the same flat level at the top. It is a mistake to suppose that iron is the best material for the back and sides of a grate; fire-brick is much better. Iron absorbs the heat—fire-brick throws it out, and besides it can be white-washed which is a great economy, for white throws out both light and heat, which black does not. All parts of a fire-place not liable to be blackened by smoke, should be kept white; it is a common practice to do so in the United States.

"Any workman may get the angle of the sides by an easy way, shown at figure 5. On a board, bench, or table, or on the floor, draw three equal squares, from twelve to fifteen inches each way, as A, B, C; and from the back corner *e* of the central square B, draw a diagonal line across the square A, to the outer corner *f*. This gives the angle at which the sides are to be fixed; and if a wooden bevel or mould-board be made exactly to this plan, a bricklayer will always be able to use it in setting out his work, and with something like certainty that he is doing right. If the chimney should be an uncommonly smoky one, or if the grate should not be exactly of the required width, either of the other two angles shown by the dotted lines may be chosen. To leave room for sweeping the chimney, the upper part of the back is to be a single slab, as at *o*, figure 2, which is to be fitted so as to shift in or out. This can easily be done by standing the slab in its place, and finishing the other work up to it, being careful to leave all level at the top. By taking out this slab when the chimney requires sweeping, room is left for the passage of the brush, and when it is replaced it leaves the chimney throat as perfect as before.

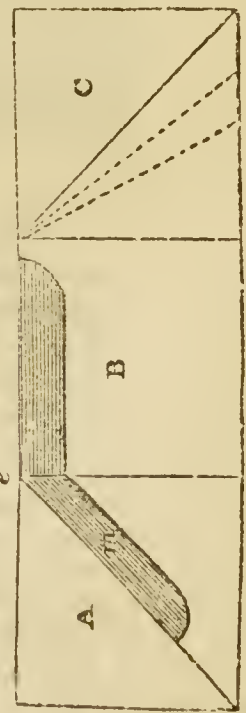


Fig. 5.

"The true proportions of a grate are, to have the width of the front three times the

width of the back. Nine inches should be the width of the back, and the depth of the grate from back to front the same, which multiplied by three, gives twenty-seven inches as the width of the front. These dimensions are not to be departed from, unless under strong necessity; by keeping to them, the sides or copings of the fire-place will always be at an angle of 45 degrees, as above-mentioned. As a rule, the height of the fire-place should be the same as the width.

"If these directions are carefully followed, it will be found that the fire-place will be complete all but the bars, a matter worth consideration, because the less iron there is about a grate the better. The bars and bottom may be made of iron all in one, and the bottom is not to be more than five inches from the hearth; for a grate when fixed low sends more heat into the room than when fixed high. Figure 6 represents a fire-place

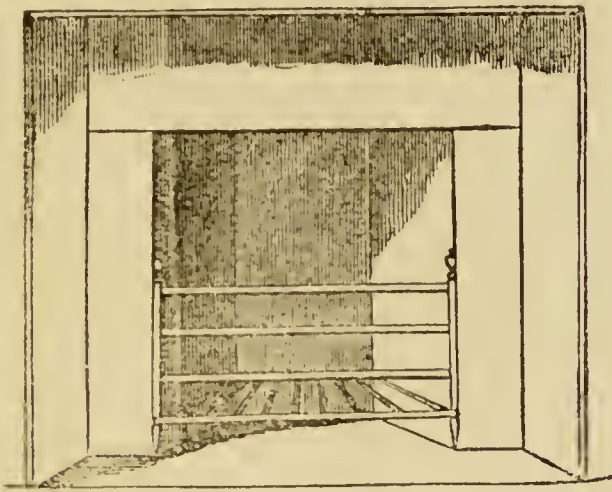


Fig. 6.

complete. It does not look so elegant or showy as those which modern taste has produced, but it will be found far more serviceable and economical.

"In cases where the breast of the chimney is nine inches thick, the four inches which have to be allowed for the throat behind this, will make the fire-place thirteen inches deep. The back must then be thirteen inches wide, and the front three times thirteen, or thirty-nine inches, and the angles will be in their true position. A fire-place of this size will warm a large room, while a grate nine inches deep will serve for all ordinary sitting-rooms.

"A cheerful and steady fire is so great a comfort as to make it worth while to take a little pains to insure it. The plan here described, if properly carried out, cannot fail of success, and will leave little need for chimney-pots or cowl." See also *Heat*.

FIRE DAMP, (sometimes called *Choke*

Damp). An inflammable gas, evolved in coal mines, it consists almost entirely of light carburetted *Hydrogen*.

FISH.—As an article of diet this properly claims attention here; it is generally wholesome, and being easier of digestion than most kinds of flesh, may often be taken by convalescents and sickly persons, when stronger food could not be permitted. Of the different kinds of fish, which we commonly classify as Fresh Water, Salt Water, and Shell Fish, Dr. Paris observes that—"Turbot, Cod, Whiting, Haddock, Flounder and Sole, are the least heating of these nutritive species; and the flakiness of the fish, and its opaque appearance after being cooked, may be considered as true indicators of its goodness, for when the muscles remain semi-transparent and bluish after sufficient boiling, we may reject it as inferior in value, and not in season. When fish is in high perfection, there is also a layer of white curdy matter resembling coagulated albumen, interposed between the flakes. The Whiting—"the chicken of the sea,"—is well adapted for weak stomachs, on account of the little viscidinity which it possesses; it is at the same time tender, white, and delicate, and conveys sufficient nutriment, with but little stimulus to the system. The Haddock is firmer in texture. Cod is not quite so digestible as the two former, but it is nutritious. Turbot is wholesome, *without lobster sauce*. Sole is tender, and yet sufficiently firm; it is, therefore, easy of digestion, and affords proper nutriment to delicate stomachs. Salmon is very nutritious, but being one of the oily fishes, is less digestible than many others—vinegar in some degree corrects the fault. Eels are always indigestible; so, we may add, are all kinds of shell-fish except Oysters, which may in general safely be given to invalids. Of the fresh water fish, the Trout and the Tench are perhaps the only ones which will suit weak stomachs; few of this class are palatable without rich wines and sauces, and therefore should be avoided by such." By Dr. Paris's observations, above quoted, it will be seen that the kinds which the physician can recommend are of firm texture, white and opaque when boiled, without oiliness and viscidinity: neither Mackerel, Herrings, nor Sprats, all fish much used as articles of diet, are enumerated above; the two last are decidedly unsuitable for any but strong stomachs; the first, if quite fresh—that is, within about 12 hours of being caught,—are not unwholesome; if the weather be cool, the time may be extended to 24 hours, but after that they

get soft and flabby, and become red round the eyes, sure signs that they are unfit for food. Some kinds of shell fish are, as it is well known, poisonous at all times; others are occasionally so, under peculiar circumstances which do not appear to be clearly understood; such are the Cockle and the Muscle. Those who feed much upon fish appear to be especially liable to chronic cutaneous diseases. It should be mentioned that the Salmon, Herring, and other oily fishes have, when kept too long, acted as irritant poisons. Boiling is the most wholesome way of cooking Fish.

FISH GLUE or Ichthyocalla, see *Isinglass*.

FISH SKIN DISEASE, see *Ichthyosis*.

FISSURE. (Latin *fissure*, from *findo* to cleave). Sometimes applied to a very fine crack in a bone; but more usually to a more marked division, such as *F. silvii*, the fissure which separates the anterior and posterior lobes of the cerebrum; *F. umbilicalis*, the groove of the umbilical vein, situated between the large and small lobes at the under and fore part of the liver, which, in the fœtus, contains the umbilical vein; and the *Fissure of the Spleen*, the groove which divides the inner surface of the Spleen; (see *Brain, Liver, Spleen*).

FISTULA (Latin for a pipe or reed). A long, sinuous, pipe-like ulcer, callous within, often communicating with a larger cavity. The chief kinds are—*Fistula in Ano*, penetrating into the cellular substance about the anus, or into the rectum itself: those in which the matter has made its escape by one or more openings through the skin only are called Blind External Fistulæ; those in which the discharge has been made into the cavity of the intestine, without any orifice in the skin, are termed Blind Internal Fistulæ; and those which have an opening both through the skin and into the gut, are called Complete Fistulæ.

F. in Perinæo is Fistula in the course of the Perinæum, sometimes extending to the urethra, bladder, vagina, or rectum.

F. in Lachrymalis is Fistula penetrating into the lachrymal sac; and *F. Salivary* is Fistula penetrating into the salivary duct from a wound or ulcer. In Sharp's Surgery this last is described as "a disorder of the canals leading from the eye to the nose, which obstructs the natural progress of the tears, and makes them trickle down the cheek; but this is only the first and mildest stage of the disease: in the next there is matter discharged with the tears from the *puncta lachrymalis*, and sometimes from an orifice broke through the skin between the nose and angle of the eye. The worst

and last degree of it is when the matter of the eye, by its long continuance, has not only corroded the neighbouring soft parts, but also affected the subjacent bone."

In surgery, the term *Fistula* is sometimes used synonymously with *Sinus* (which see). In this case, it signifies an opening or passage left by an abscess, perhaps in consequence of improper treatment, but more likely because the constitutional powers are too low to admit of adhesive inflammation, and the formation of healthy granulations; or it may be owing to the existence of a ligature, or the presence of a piece of dead bone, which sources of irritation must be got rid of before a cure can be effected; this, therefore, would be the object attempted at the outset of the *treatment*; which may be thus divided:—1st, to remove the cause; 2nd, to arrange that the matter secreted in the passage shall not be suffered to remain, and to effect this object a fresh opening sometimes has to be made; 3rd, to promote adhesion of the walls of the passage by the introduction of "a tent" of lint, and stimulating injections of Sulphate or Chloride of Zinc; sometimes also pressure is found serviceable for the attainment of this end.

Fistula in Ano is the most common form of the disease, and that which is generally understood by the term *Fistula* used by itself. In this, as before stated, the sinus is situated close by the anus, some inches above which the orifice, or tube, leading from the inside of the bowel often opens, although sometimes it runs up close to the interior, but does not open into it. There is commonly intense pain with this kind of *Fistula*, and an inability to move about. Domestic treatment will do little for it. If there is an external orifice, it can be kept open by means of twisted lint passed deeply in; but most commonly an operation is required which, although sharp, is short in its continuance: it consists in making a complete division with the knife, of the whole of the parts between the fistula and the bowel. After this the cure is generally effected without much difficulty; the spasmodic pains, nearly always felt, are at once relieved, and the constitutional derangement gradually passes away.

Fistula in Perinæo can only be treated by a competent surgeon: it is nearly always accompanied by a stricture of the urinary passage; so that the fluid passes out of the external orifice of the sinus, and nothing but an operation can be of much service. A *Lachrymal Fistula* is commonly treated by passing a silver instrument, called a style,

down into the nasal duct, and keeping it there until the inflammation which produced or accompanied the abscess is subdued: this, too, must be a case for a surgeon: as must also a *Salivary Fistula*, which occurs in the cheek, and is caused by an abscess formed in or near the duct of the parotid gland, where the saliva passes from it to the mouth.

Fistula cases are nearly always difficult of treatment, and, although not in themselves dangerous, they are not unfrequently attended by fatal results, arising out of the constitutional depression which they occasion by the long-continued wearing pains, and drain upon the system of the protracted discharge. See *Ulcers*.

FITS. According to the popular application of this term, it may mean an attack of *Apoplexy*, *Epilepsy*, *Hysteria*, or any *Convulsive* or *Spasmodic affection* whatever, and, therefore, we must refer our readers to those several heads for *symptoms*, *treatment*, &c. As, however, there are certain general rules and directions which will apply to nearly all, we would call their attention to the following observations:—First, as to premonitory *symptoms*; these are, anxiety of mind, and dejection of spirits; nausea, and a feeling of faintness; yawning and stretching; swimming in the head, and palpitation of the heart. Second, as to *treatment*—loosen any part of the dress which may appear tight, especially about the neck and chest; if a female, cut the stay-lace, as tight lacing often causes Fits; sprinkle cold water on the face, and apply volatile stimulants to the nostrils; rub the temples with Eau-de-Cologne, *Æther*, or strong spirit of some kind, and blow upon them; sprinkle cold water in the face, and as soon as the patient can swallow, give 30 drops of Sal Volatile in Water, or the same of *Æther*, or if neither are at hand, a little cold Brandy and Water.

When the Fit is over, a gentle aperient should be taken, to be followed by cold bathing, exercise, and, if possible, change of air.

FIXED AIR. A name formerly applied by chemists to the gas which was extricated from lime, magnesia, and alkalies: we now call it *Carbonic Acid Gas* (which see.)

FIXED BODIES. Are those substances which do not evaporate by heat; so all oils which are not *volatile* are *fixed*, as are non-metallic elements which can neither be fused nor volatilized, as *carbon*, *silicon*, and *boron*; their steadfast property being called *fixity*.

FLANNEL. Under this head we include woollen clothing in general, which being a bad conductor of heat is best fitted to pro-

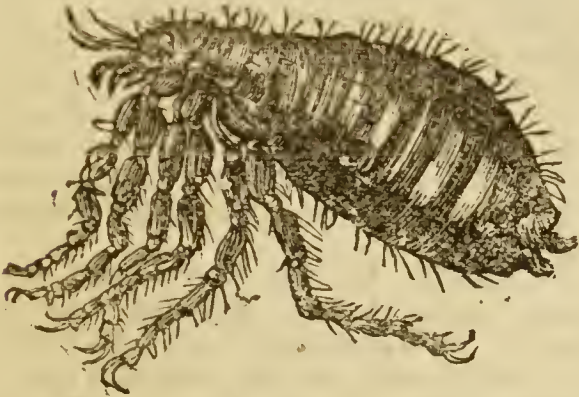
tect the body against the vicissitudes of temperature, which occur especially in this climate; but the generally understood meaning of the term is restricted to the blanket, and the finer kinds of spun wool which is used for under-garments. With our great liability to pulmonary complaints, there should not be a man, woman, or child in this country who does not wear flannel next the skin; over the chest certainly, and down the course of the spine, if not elsewhere; and it should be worn, too, in summer as well as winter, although it may be thinner in the latter season, as it absorbs the perspiration, and prevents the chills, which a wet linen or cotton garment is sure to cause. These chills are fruitful causes of the dysenteric and febrile affections of hot seasons and climates, against which, as all experience goes to prove, there is no such protection as Flannel. Why, then, is it not more generally worn? Mothers and nurses should co-operate with the medical man to obtain a universal recognition of its utility. See *Clothing*.

FLATULENCE (Latin *flatus* a blast). Wind in the intestines; this is very commonly the result of indigestion, owing to the liberation of gas from partially digested food in a state of fermentation. Sometimes, however, an impaired state of the nerves, gives rise to distension of the bowels by wind, an immense quantity of which is often discharged by the mouth or anus. Flatulence should be always considered as a symptom, and treated accordingly; it occurs in the various forms of Dyspepsia, or Diarrhœa, and Dysentery, in Hysteria, in Colic, Remittent Fever in adults, and Infantile Remittents, (all of which see). Where it prevails, there is generally an excess of acid in the stomach, so that in the remedies prescribed, alkalies and other anti-acids, often form the bases; they are usually combined with warm spices, and other aromatics, forming what are termed *Carminatives*, (which see). With nervous persons, however, this is not so generally the case, and tonics will be of more service for such. This is a good form of preparation:—Aromatic Sulphuric Acid, 10 drops in a wineglassful of water, when required; or 20 drops of dilute Nitric Acid, in a wineglassful of Infusion of Orange-peel, Gentian, Camomiles, or Columba. For Flatulence in Infants, there is nothing better than Dalby's Carminative, prepared as directed at page 80. For general Flatulency where there is much difficulty of expulsion, clysters of Assafoetida or Rue, will be of service, as well as this mixture:—Take of Sulphuric Ether, and Tincture of

Assafoetida of each 2 drachms, Peppermint-water, 6 ounces, take a table-spoonful occasionally. Hot applications to the stomach, and friction, will frequently afford considerable relief. Flatulent persons, should avoid most vegetables and fruits, and take only such food as is light and easy of digestion. Towards the termination of fevers, the stomach is often much distended with wind; this is looked upon as a bad sign; it is called *Tympanitis*, (which see) and *Wind*.

FLEA. We give a cut of this troublesome parasitic insect, although probably, most of our readers are but too well aware of its

gree. When there are Fleas in a bed-room, let the carpets be taken up, and the floors frequently washed, and then sprinkled with a strong decoction of Wormwood; among the bed clothes, put a bag filled with Dry Moss, the odour of which is said to be very offensive to them, as is also that of fresh-gathered Pennyroyal leaves. As a trap for them, some use Alder leaves, gathered while the dew is on them, to this the Fleas adhere, and may then be easily taken. Mercurial Ointment rubbed in the joints of the bedstead, and Sulphur fumigations, are also said to be efficacious in killing or expelling them;



form; for it is one of our commonest household nuisances; we have it here, however, in its magnified proportions, and a horrid monster it looks, with long muscular, spiny legs, well adapted for leaping, and scaly body, neck, and head, beset with hairs, and armed with two lancets within a sheath, for piercing the skin of its victim, and a proboscis for sucking up its blood. Into the natural history of the creature, it suits not with our present purpose to enter at any length; we may just say that its scientific name is *Pulex irritans*, and that the female, of which the above is a representation—the male being somewhat smaller, and different in shape, as shown in next column—deposits her eggs, some twenty or thirty in number, in the crevices of boards, or amid collections of dirt, or rubbish of any kind, from whence in six or eight days emerge the whitish, greasy-looking maggots; these, when a fortnight old, envelope themselves in small cocoons, and after remaining in this state about ten days, come out as perfect Fleas, ready to make war upon men, women, and children, but especially affecting those who have the most tender skins. How to get rid of them? is the anxious question with all careful mothers and tidy housewives. Cleanliness and indefatigable hunting, we reply; there is nothing to be done without trouble, and catching this nimble skipper, requires both quickness and patience in no ordinary de-

Sweet or Train-oil they cannot abide, and to drive them from their last stronghold, the coat of the cat or dog, it is but necessary to pour some along the back, and then rub it in with the hand, until it is well incorporated with the hairs. Here is a choice of remedies; but all will be of little avail without cleanliness—personal and otherwise. Only dirty, negligent people, are much troubled with Fleas, unless they are necessitated to live in old houses, of which they have long had possession, or in localities extremely favourable to their propagation; the efforts of such should be constantly directed to keeping them under, and the above information may probably assist them. They are often extremely annoying to sick persons, and irritable children, depriving them of rest, and thus retarding restoration to health; for this reason, the *Family Doctor* is bound to wage war against them; besides, they inflict severe bites, and make ugly marks on the skin; now, although *Flea Bites* are proverbially small matters, yet, they sometimes cause serious inflammation, not to speak of the disfigurement; they should be rubbed over with a little Cold Cream, and if much inflamed, kept wet with a lotion of Elder Flowers with a few grains of Sugar of Lead dissolved in it.

FLEA BANE. This is the *Erigeron Ca-*

nadensis of botanists, belonging to the natural order *Compositæ*; it is found plentifully in the southern counties of England, and has diuretic, tonic, and astringent properties, which render it useful in dropsical



complaints, and diarrhœa. Dose, of the flowering tops, in Powder, from 30 to 40 grains; of the Infusion, from 2 to 4 ounces; of the Extract, from 5 to 10 grains.

FLESH. It is not generally understood that all flesh is muscle, and employed as such in the movements of the living body; it consists chiefly of *Fibrine* (which see); also *Muscle*. Under the several heads of *Food*, *Beef*, *Mutton*, *Pork*, *Veal*, &c., we shall speak of the different kinds of flesh employed for nutrient purposes, and endeavour to show their respective powers and properties, and so inform our readers on those important questions—"What to eat?" and "What to avoid?" whether in health or sickness.

FLESH BRUSH. A smooth, hard brush, intended to act as a counter-irritant, or to stimulate the surface of the *Skin* (which see) and prevent the pores becoming clogged, in which state they are unfit for the performance of their excretory office. Persons whose circulation is languid, and system generally weak, do well to use the flesh brush frequently, especially on coming out of the bath, when it is desirable that a healthy glow should be felt through the

frame; the friction, however, has been found too powerful for delicate skins, and it has at length given place to a more convenient and altogether better contrivance. See *Hair-glove*.

FLEXOR (Latin *flecto*, to bend). A muscle which answers the purpose of bending the part into which it is inserted; its opposite is termed *Extensor* (which see).

FLINT (Latin *silex*). A mineral; hence the *Liquor of Flints* (*Liquor Silicum*), a name formerly given to the Solution of Silicated Alkali.

FLOCCI VOLITANTES (Latin for flying specks). A symptom of eye-disease, consisting of the appearance of small moving objects such as locks of wool, or insects, before the sight. See *Eye*, *Musæ Volitantes*.

FLOCCITATIO (*flocus*, a lock of wool). Picking the bed-clothes; a symptom sometimes observed in fever and other patients. See *Fever*.

FLOODING. Uterine hæmorrhage, or, to speak more plainly, bleeding from the womb. This commonly occurs after *Abortion* (which see); in the puerperal stage of *Labour* (which also see); or it may be occasioned by disease of the womb. Immoderate flow of the menses is also called flooding, and to this some women are very subject; it is extremely weakening to the system, and should be checked as soon as possible. The best treatment is perfect quiet, and astringent and tonic medicines, such as this: Tincture of the Sesquichloride of Iron, 2 drachms; Infusion of Quassia, 6 drachms: take a tablespoonful every four hours. If there is much pain and irritation, add Tincture of Conium, or Hyoscyamus, 2 drachms; should this not have the desired effect, consult a medical man, as there may be disease of the womb. See *Menstruation*.

FLOUR. The edible part of grain reduced to powder, and deprived of the husks by sifting. See *Farina*.

FLOWERS (Latin *floris*). A term formerly applied to bodies which assume the form of powder by sublimation, or crystallization; such as the Flowers of Benjamin (*F. Benzoes*), now called Benzoic Acid; Flowers of Sal Ammoniac (*F. Salis Ammoniaci*), Subcarbonate of Ammonia; Flowers of Sulphur (*F. Sulphuris*), Common Sublimed Sulphur; Flowers of Zinc and of Bismuth (*F. Zinci*, *F. Bismuthi*), Oxides of those metals, &c.

FLUCTUATION (Latin *fluctuo*, to flow, or rise and fall, like the waves). The perceptible motion communicated to pus, or other fluids by pressure, or *Percussion* (which see).

FLUID OF COTUNNIUS. A thin gelatinous fluid, found in the bony cavities of the labyrinth, so called from the name of the anatomist who first described it: *Aqua Labyrinthi* and *Perilymph* are names by which also it has been known.

FLUIDS. Are substances which have no fixed shape nor coherence of particles; they are divided into *Gases* and *Liquids* (which see).

FLUIDS OF THE BODY. A term sometimes applied to the blood, and other humours of the animal economy. Speaking of those of the human body, we say, 1. That they are *Crude*; that is, not having quite put on the animal nature; as the *Chyme* and *Chyle*; 2. They are *Sanguineous*, as the *Blood*; 3. *Lymphatic*, that is, found in the lymphatic vessels; 4. *Secretory*, those which are separated from the blood and called *Secretions*; 5. *Excremenitious*, those which are eliminated, or cast out from the body as the *Fæces*, *Perspiration*, *Urine*, &c. Then again, the secreted fluids may be *Lacteal*, or milky, as the milk, juice of the prostrate gland, &c.; *Aqueous*, or watery, as the aqueous humour of the eye; *Mucous*, as the mucus of the nostril, &c.; *Albuminous*, as the serum of the blood; *Oleine*, as the oil of the adipose membrane; *Bilious*, as the bile and wax of the ears.

The Fluids of the Body are also divided according to their motions; thus they are *Circulating*, that is, continually passing through the vessels; *Commorant*, circulating with a very slow motion, as the oil of the adipose membrane and the semen; *Stagnant*, remaining for a certain time in some receptacle, as *Cystic Bile*, *Urine*, and the *Fæces* above named. (See their several heads).

FLUIDITY (Latin *fluo*, to flow). The state of bodies when their parts are readily moveable in all directions and separable from each other; bodies of which the parts are condensed, or thickened into a coherent, though tremulous mass, have a partial fluidity, and hold a middle place between liquids and solids; such are *Jellies* (which see).

FLUKE. The *Fascicola Hepatica*, an intestinal worm. See *Worms*.

FLUO-BORIC ACID. A gas produced by the decomposition of Fluor spar, by vitrified Boracic Acid. Its salts are called Fluoborates.

FLUOR ALBUS. A white discharge from the uterus. See *Leucorrhæa*, *Menstruration*.

FLUOR SPAR. Derbyshire Spar; properly Fluoride of Calcium, a mineral well known in many districts, being much used

in metallurgic operations; acted on by Sulphuric Acid, it produces *Hydrofluoric Acid*; and this acid, which is a colourless gas, acting upon glass, produces *Fluo-silicic Acid*; and this again, combined with water, makes what is termed *Silico-hydrofluoric Acid*. We might proceed to speak of *Fluo-silicates*, double Salts, consisting of two parts of *Hydrofluat* of *Silica*, and one Hydrofluat of some other base; and of *Fluorine*, a substance occurring chiefly in Fluor Spar in a state of combination with Lime; the base, as some chemists suppose, of Fluoric Acid: we might describe the uses and particular properties of all these combinations, but this would be entering further than is at all necessary into the mysteries of chemistry.

FLUX (Latin *fluo*, to flow). A name sometimes given to *Diarrhæa*, as Bloody Flux is to *Dysentery*. (See both those heads.)

FLUXUS CAPILLORUM. A term applied by Celsus to the falling off of the hair. (See *Alopecia* or *Alopina*). Parts entirely bald were called by him *Areæ*; this affection was termed by Sauvages *Alopecia areata*, and by Willan *Porrigis decalvans*. When the whole head is affected it is termed by the French *la Pelade*.

FÆTUS. The infant in the womb, from the fifth month to the period of birth, is so called; previous to that time, it is commonly called the Embryo; but these terms are entirely arbitrary, and we frequently use one for the other; (see *Conception*, *Gestation*, *Pregnancy*.) The destruction of the *Fœtus in utero* is now termed Criminal Abortion, and is sometimes spoken of as *Fœticide*.

FOLIATA TERRA, (Latin *folium*, a leaf, and *terra* the earth). A term applied to Flower of Sulphur, Acetate of Potash, on account of a supposed resemblance to a leaf in the flakes in which they are precipitated.

FOLLICLE (Latin *follicis*, a bag). A very minute secreting cavity: thus the *Sebaceous Follicles* are small cavities situated in the skin, which supply the cuticle with an oily or sebaceous fluid, by minute ducts opening upon the surface (see *Skin*); and the *Mucous Follicles* are those situated in the mucous membrane, chiefly that of the *Intestines* (which see) and *Gland*.

FOMENTATION (Latin *foveo*, to keep warm) The application of warm water, or some medicinal concoction, to the skin by means of a sponge or flannel; this should be wrung out as dry as possible, and applied as hot as the hands can bear it, which may be

200° Fahrenheit, if a washerwoman or nurse, accustomed to great heat, make the application. A thick piece of flannel is perhaps best for the purpose, as it can be closely laid over a larger surface than a sponge; when put on the part affected it should be covered over with a blanket, which absorbing the moisture, is better than any waterproof material; let it remain on from three to five minutes, and have another flannel ready to take its place directly the first is removed; keep on in this way for about half-an-hour, when the fomentation may, for a time, be discontinued. In congestion, and the early stages of inflammation, it frequently affords great relief. Decoctions of Poppy Heads, Marsh Mallows, and other herbs are recommended for this purpose, and may be used, although, we believe, they possess few, if any advantages, over plain water, especially if it be soft.

FOMES, plural FOMITES (Latin for fuel). A term applied to substances imbued with *Contagion* (which see).

FOMES VENTRICULI is an old name for *Hypochondriasis* (which see).

FONTANAL (Latin *fons*, a fountain). The space left in the head of an infant where the frontal and occipital bones join the parietal. It is also called *Fons pulsatilis*, and more commonly *Mould*. See *Skull*.

FONTICULUS (same root). An *Issue*, (which see).

FOOD. This term comes from the old Saxon *fædan*, and signifies, says Dr. Johnson, "anything that nourishes;" it may be either solid or liquid, animal or vegetable, and on its nature and quality, and the quantity taken, depends in a great measure the health of the community. What to eat and drink, and what to avoid? are questions often asked and often answered; but the rules of good feeding, as well as of good breeding, are constantly set at nought by those who prefer the indulgence of their appetites to the exercise of a sound discretion in dietary matters. We shall here endeavour, simply and clearly, to lay down a few general rules, in relation to this subject, referring our readers for directions, in particular cases, to the heads of the several diseases and states of health treated of in this volume.

Food, then, as we have said, is anything that nourishes—its use is to supply the kind of material which forms the bones, and muscle, and other constituent parts of the animal body; and to make good the waste caused by the circulatory, and respiratory, and other processes of life. It must be evident, then, that the state and condition

of the body, and of the mind also—for this has an intimate connection with the physical organization—must depend greatly upon the nature of the food taken.

Chemistry informs us that the principal constituents of the human body are the organic elements, carbon, hydrogen, oxygen, and nitrogen, and it is the waste of these which we are called on to supply by a sufficient quantity of proper food; these are, in fact, the elements of nutrition; we eat and drink them in various forms of combination, and they maintain, in due proportion, the solid and fluid matters of the body. The food which we take into the stomach, is there reduced by the process of digestion into a homogenous fluid (see *Chyle*), and then by the process of assimilation, its different elements are separated, and distributed through the system, each to give strength and persistency to some particular tissue or organ; thus, for instance, we are constantly exhaling carbon, which is supplied to the lungs by the veins, at the rate, as it has been pretty clearly ascertained, of about 13 ounces daily, and this is but one of the many instances of consumption of material which might be adduced. If there be an insufficient supply of either of these elements, there will be an imperfect development of the parts which it contributes to form and sustain, and ill health, arising from organic disease, will, ere long, be the result. Not only do the various secretions used as food by man serve to build up the fabric of his body, and to supply the daily waste of tissue which is going on, but they also serve to keep up the animal heat within the system, this in a healthy person is generally about 98° Fahrenheit; and it is always a sign of imperfect digestion and assimilation, or of a want of nutrition, when it falls below this.

Whether vegetable or animal food is the fittest for man, has been a subject of much controversy; we are not prepared to enter deeply into this question, but it appears to us that a proper admixture of the two is the diet best adapted to supply the elements necessary for the maintenance of perfect health; true it is that a large proportion of the human race subsist chiefly, or wholly, upon the products of vegetation, and these are by no means the least healthy and robust of mankind; but then they are the inhabitants of warm climates, where so large an amount, either of nitrogen or carbon, is not required, as in cold or temperate climes. True it is, also, that the animals whose flesh is eaten by man, derive their nourishment from the vegetable kingdom, and therefore

it may be said that on the nutrient properties of plants, both man and the lower animals subsist. To this latter argument it may be replied that, in passing through the animal system, the constituent principles of plants undergo a change, and that although man could undoubtedly, as many do, subsist, even in this climate, on a purely vegetable diet; yet, seeing that God has supplied animal food in abundance, and given man the inclination to eat of it, with teeth peculiarly adapted for its mastication, and other organs for its digestion and assimilation, it does appear plain, that man was intended to be an animal as well as a vegetable feeder, and that there is no reason why he should abstain from that which is both wholesome and pleasant to him, unless there is some higher law than that which relates to his physical wants and propensities, which enjoins abstinence from animal food; those who entertain this belief, of course, do right to be vegetarians. In "Lectures on the Food of Man," by Dr. Lankester, we find the following arrangement of the various substances which enter into the composition of human diet generally:—

1.—ALIMENTARY SECRETIONS.

A. Nitrogenous, or Nutritive Secretions.

Forms of Protein.

Vegetable Albumen.	Animal Albumen.
„ Fibrin.	„ Fibrin.
„ Casein.	„ Casein.

B. Carbonaceous, Respiratory, or Combustible Secretions.

Celulose.	Sugar-Alcohol.
Starch.	Oil of Fat.

2.—MEDICINAL SECRETIONS.

A. Organic Acids.

Citric Acid.	Malic Acid.
Tartaric Acid.	Oxalic Acid.

B. Volatile Oils.

Cinnamon.	Pepper.
Cloves.	Mustard.
Nutmegs.	

C. Alkaloids.

Theine.	{ Tea and Coffee. Paraguay Tea.	Theo bromine.	{ Choco- late and Cocoa.

The nitrogenous secretions which are found in plants are all modifications of the principle called *Protein*, which is the basis of *Albumen*, *Fibrin*, and *Casein* (all of which see). Out of these secretions the flesh of animals—that is, the muscles, nerves, &c.—are formed; and, by feeding on such flesh, man obtains a supply of those principles which his system most requires, and in a form best adapted to his wants.

The medicinal secretions, although con-

sidered as articles of Food, do not contribute to the performance of any of the great functions of life, but they are of service in preventing or alleviating disease; such are the alkaloids contained in Tea, Coffee, Chocolate, &c., and the various spices which contain volatile oils; the use of these is, in most cases, rather occasional than habitual.

To provide for the artificial wants of men, there are various kinds of Food, some of which would at first sight appear not to yield any of the above named secretions; nevertheless, it will be found, on examination, that they do in reality belong to one or other of the classes named, and to exercise a due influence on the system. We have shown that the Food of man, as well as of the lower animals, is derived originally from the vegetable world; but there is one striking exception to this rule presented to our notice in *Chloride of Sodium*, or *Salt*, which appears to be necessary to the proper performance of the functions of the animal body. It has been suggested, that "this is probably the source from which is obtained the Chlorine which enters into the composition of the Hydrochloric Acid, existing in the gastric juice, which is secreted by the mucous membranes of the stomach during digestion."

We have now, as we trust, sufficiently prepared the way for a consideration of the different kinds of food, or, to use a comprehensive term, *Ingesta*—by which we understand both solids and liquids—taken by man: and first, with regard to solid food, both the nature and necessary quantity of which will vary considerably, according to the habits and occupation of the individual; but, as a general rule, it may be set down that a healthy man, taking ordinary exercise, should consume daily—of Meat, about $\frac{3}{4}$ of a pound; of Bread, the same; of Potatoes and other Vegetables, $1\frac{1}{2}$ pound; of Cheese, 2 ounces; Butter, 1 ounce; Sugar, the same; Tea, $\frac{1}{2}$ an ounce, or Coffee, 1 ounce. The Meat may, and should, be sometimes, changed for its equivalent in Fish, and, if Pudding or Pie be taken, so much Vegetables will not be required; a larger amount of solid Food than the above cannot be conducive to health, and is very likely, if persisted in, to produce actual disease, the more especially if the Food be of a rich and stimulating character. Females, whose habits generally are less active than those of males, cannot, as a rule, take, with advantage, above three-fourths, or, perhaps, half this quantity, nor can any person whose digestive powers are at all weak; it is of consequence that, by such, the kind of Food which

contains the most nourishment in a small compass should be taken; we would, therefore, advise the reduction in the above scale to be made in the Vegetables, and the Cheese must be dispensed with, as indeed it may well be in all cases: we should perhaps have included Milk in the scale, for, although in a liquid form, it contains a considerable proportion of solid matter, from 2 to 4 ounces daily may be taken with advantage by a healthy, active person; those who require nourishment in a concentrated form may take at least double the quantity, and an Egg or two daily, if they find that they can digest it; light farinaceous Puddings are also good for such, and when these are obtainable, Vegetables may be altogether discarded.

"Eat little and often" is the advice commonly given to weak and delicate persons, but this advice should be taken, like the Food, with discretion; one who can sit down at meal times, and take Food with enjoyment, although it be but small in quantity, should only, as a rule, eat at these times; there can be no objection to a biscuit, or something light, between meals, if there is a sense of faintness, but it is best to wait until the regular periods if possible, and these should not be more than three, or at most, four hours apart; with regard to the best times for eating. See *Meals, Breakfast, Dinner, Tea, and Supper*.

There are many persons whose means will not allow of their taking Animal Food once a day; it is not desirable for any, except convalescents, to take it oftener. The following is the cheapest dietary table on which a man actively employed, and so circumstanced, ought to subsist:—Bread 1 pound, Potatoes 2 pounds, Cabbage or Greens of some sort, 1 pound, Peas or Beans 4 ounces; boil the vegetables, then fry them in Lard, 4 ounces; divide the mess into two meals; with the first, take a third portion of the Bread, with the second a like portion, and eat the remainder of the Bread with 2 ounces of Cheese, or a little Dripping, or Treacle, or perhaps a Herring; occasionally the Vegetables may be made into a quart or so of Soup, with a $\frac{1}{4}$ of a pound of fat Pork, thickened with a handful of flour or oatmeal; but too much of this would be likely to produce flatulence, and, perhaps, a relaxed state of the bowels. Bread and milk for breakfast, bread, or it may be potatoes and pork, nearly all fat, for dinner, and thick oatmeal porridge for supper, is the common diet of our farm labourers, than whom, generally speaking, no class of men can be more hearty and robust; but this dietary would scarcely suit any one not very actively employed in the open air; it

contains a large proportion of the most nutritious principles, but it requires strong powers to digest and assimilate them.

As a wholesome and nutritious Food for children, suitable for those of limited means, we can recommend the following:—Take of Scotch Oatmeal $\frac{1}{4}$ of a pound, boil it in a pint of Water for about half an hour, stirring it the while; then add a pint of Milk, and sweeten with 2 ounces of Treacle; this will serve one child for breakfast and supper; for the mid-day meal, give about a pound of boiled Potatoes and Greens, and 2 ounces of Bacon; of course, if a $\frac{1}{4}$ of a pound of Beef or Mutton can be afforded, so much the better.

As a rough calculation, founded on chemical analysis, we may state that 5 pounds of Rice, 4 of Potatoes, $1\frac{1}{2}$ of wheat Flour, or 2 pounds of Bread or Oatmeal, may, either of them, be taken as an equivalent to $1\frac{1}{4}$ of Beef or Mutton of the average degree of fatness, in the production of muscle; if this is borne in mind, it is easy to estimate how much of either description of food would represent, in point of nutrition, a given quantity of any other kind which it might be impossible to procure, or necessary to withdraw from the dietary table on account of its being unsuitable for a particular case, or for any other reason; thus, if we take away a pound of Meat, nearly 2 pounds of Bread will be required to supply the same amount of nutrition, and so on.

We should bear in mind, too, that there are certain mineral elements contained in the articles used as food, both Vegetable and animal, which are necessary adjuncts in the several processes of our internal economy; hence it is desirable that these alkaline and other chemical principles should not be lost in the cooking; soups and gravies, made with the water in which meat and vegetables are boiled, contain a large proportion of these elements, and therefore their frequent appearance on the table is desirable; the weakly stomach will have some difficulty in digesting them, and for this reason they cannot be habitually taken, except by the strong and hearty. If the nutritive principles of any kind of food are presented to the stomach in too concentrated a form, as in jellies and very rich soups, cream, custards, &c., they will be almost sure to disagree, as will meat, eaten without a due proportion of bread or vegetables, unless under some peculiar circumstances,—as in very cold climates. Great mischief arises from taking an undue quantity of stimulating food, and also from swallowing it hastily and partially masticated; the diges-

tive organs have more than their proper work to perform, and naturally rebel; hence we have imperfect assimilation, fermentation, and chemical change, converting nutrients into poisons, and tending to *Dyspepsia*, *Constipation*, and *Hypochondriasis* (which see). The Temperance movement ought to include eating as well as drinking, for gluttony has its numerous victims as well as inebriety.

Having disposed of the more solid part of our subject, it behoves us now to speak of *Liquid Food*, which is no less necessary to the support of the bodily powers; indeed we believe that extreme thirst, as the feeling resulting from the want of fluid ingesta is called, can be less easily borne than hunger, showing that the system suffers more from a deprivation of liquid than of solid aliment. The various forms of the former which are chiefly taken in this country may be classed under four heads, viz.—1st, *Diluent Drinks*: including simple Water, which is, no doubt, the natural drink of man as of all animals, and its numerous modifications, such as flavoured beverages, &c., which we need not pause to particularize; of these nature requires a constant and liberal supply, and we do well to comply with her demands, and satisfy the feeling of thirst whenever it arises, but not with stimulating liquids, which will afford but a momentary satisfaction, and cause the demand to be repeated more strongly and importunately in a very short time; 2nd, *Nourishing Drinks*, such as Broth, Beef-tea, Gruel, and Milk, which last is indispensable for the support of infant life: adults, in a state of health, do not really require any of these, but in cases of sickness, where solid food is inadmissible, they are the only mediums of nourishment to the system; 3rd, *Stimulating Drinks*, the abuse of which has led to such widespread ruin and frightful misery in our own and other countries, that many good and philanthropic men have agreed to denounce them altogether as sources of unmixed evil: we cannot bring ourselves so to regard them; our medical experience proves to us that there are many cases in which, if not absolutely necessary, they are extremely useful, enabling persons to perform certain duties on which their livelihood depends, and supporting the exhausted powers of those who, in the great struggle of life, are ready to sink beneath their heavy toils and burdens. We are quite aware that in themselves these drinks contain little, if any, real nutrition, certainly none which might not be conveyed to the stomach in other, and perhaps purer forms, but the cases to which we allude are

those in which the stimulus is absolutely required, and it seems to us that we ought to administer it in the most agreeable form: true it might be given as medicine, but why should those to whom it is really a necessary of life be debarred from taking it in the pleasanter way, because it is liable to abuse?—the same argument might be used for abstinence from all the creature comforts which a beneficent Creator has provided for man. Thus much we have felt it our duty to say upon the great temperance controversy, which has of late divided public opinion. For ourselves, we prefer water as a common beverage, and invariably drink it, feeling assured that it satisfies thirst better than any other liquid, and also fully supplies the wants of our bodily condition. We would have all our readers water-drinkers, simply because we would wish them to be strong and healthy, and not overtasked, so as to become exhausted and require the arousing effect of stimulants to enable them to perform the work from which they dare not shrink. But, alas!

“The world is too much with us, late and soon;
Getting and spending we lay waste our powers.”

We have deviated far from the simplicity of nature; we are living in a highly artificial state of society, and in many cases can no more subsist on the pure liquid element, than we can on the roots and berries, and other products of uncultured lands, on which our forefathers chiefly subsisted: still, we say, let none habituate themselves to stimulating drinks who can possibly do without them, for they are the bane of civilized life; under their influence all ties, social and domestic, are rent asunder, religion is set at nought, and man becomes a perfect demon.

For a more particular account of the nature and properties of these Drinks, (see *Alcohol*, *Ale*, *Beer*, *Wine*, and *Spirits*).

In the fourth division, we place such drinks as Tea, Coffee, Cocoa, &c., the use of which has of late years obtained so largely among all classes of this country; their action on the system is nearly the same, depending on principles of a very similar character, which chemists have agreed to call *Theine*, *Cafeine*, *Theobromine*, &c., (all of which see): the operation of these appears to consist in arresting for a time the undue progress of excretion, or wasting of the animal tissues, which goes on during, and after, active exercise of the bodily or mental powers. Hence their refreshing and invigorating effect on the toil or care-worn man; we have all experienced this, and can

estimate aright the value of a good cup of Tea or Coffee, which at once soothes and strengthens us, without causing the reaction and depression which invariably comes after the use of alcoholic stimulants. Those who have been long accustomed, like ourselves, to severe mental exertion, know well the assistance which is afforded by this kind of beverage, which also may be safely given in cases where the excitability of the brain, or inflammatory tendency, render any alcoholic stimulant extremely dangerous.

Food for Infants. To mothers and nurses this is a most important branch of our subject; we shall therefore devote to it as much space as we can, consistently with the general plan of our work, and we shall devote that space more to practical receipts than to general remarks. Let us begin with articles of Food suitable for Infants of from 3 or 4 months, to 2 years of age. Generally speaking, for the first 6 months of infantile existence, the mother's milk will be quite sufficient nutriment, if there is a plentiful supply of it; and, indeed, if the child appears to thrive, this may be all that is required for the first year; should there be an insufficient supply of this, or should it appear not to agree well with the infant, it should be alternated with artificial Food, or discontinued altogether, in either case the question of *what* Food? will have to be considered. The substitute nearest in character and quality to the maternal fluid is Cow's Milk, diluted with about a third of pure water, and sweetened, just a little, with lump sugar; this should be given in a feeding bottle, about blood-warm, every two hours or so for a very young child, say under 6 months; every 3 hours, for one above that age: if put into the bottle the last thing on going to bed, and laid under the pillow, wrapped in flannel, it will keep warm enough; should this not be sufficiently nutritious, a tablespoonful of Beef Tea or Mutton Broth, made without spice or salt, may be added to each draught of the Milk. Some thick Food will also be required, and this may be made with Baked Flour, Biscuit Powder, Tops and Bottoms, or Rusks: of the former, Hard's Farinaceous Food is a good and convenient form; it should be first mixed up with cold water, then, after having boiling Water poured upon it, simmered for ten minutes, until it thickens, then reduced with Milk, and sweetened: the Biscuit Powder may be prepared in the same manner, as may Arrowroot, to be given if the bowels are at all relaxed, in which case it will be well to boil a small piece of Cinnamon in the Milk; if

whole biscuits are used, or any other of the various forms of highly-baked bread, such as those above-named, they should be first boiled in water for a $\frac{1}{4}$ of an hour, strain off the Water, and rub the pulp through a sieve, keep it in this way, and warm in a pannikin when wanted, adding a little Milk and Sugar.

A light nutritious Food may be made with Pearl Sago, or Semolina, either of these should be boiled in Milk, until thickening takes place, strained and sweetened: care must be taken in all these foods not to put much sugar, as it is apt to produce acidity of stomach and flatulency. If the bowels are confined, as is sometimes the case when flour is much given, let a change be made to Barley Gruel; Pearl Barley, or the prepared grain, known as "Robinson's," should be used; they should be boiled in water, strained and mixed with Milk, like the Biscuit food: Rice Gruel is also useful in cases of relaxed bowels; prepare it as follows:—wash a small cupful of Rice, and boil it in a quart of Water for two or three hours, strain off the liquid from the grain, and put it by in a cool place, when wanted for use mix enough for once with an equal quantity of Milk, and sweeten; Brown Sugar should be used if the bowels are much constipated; or Treacle, which is yet more relaxing; should these not have the desired effect, put in a small piece of Manna instead of Sugar; Gelatine or Isinglass may be added to either of the above foods, except those made with Broth or Beef Tea, where the child does not appear to thrive upon Milk and Farinaceous diet alone. With young children, Bread and Milk rarely agrees, but it is a good Food once a day for those above the age of three years, who are strong and healthy; the bread should be two days old and of good quality; unless the Milk is very good, the water in which the bread is boiled, should be strained off before the milk is added.

Children after the age of 2 or 3 years have advanced beyond spoon victuals, into the age of meat and puddings; the former (Mutton or Chicken) should be well cooked, and cut up small, take Bread with it; no young child should eat Potatoes, nor any other vegetables; but little fruit should pass the lips before the age of 5 or 6, and then only a little, and of the most digestible kinds. (See *Fruit*.) If Bread and Butter be taken, it should be very thinly spread. As to *Puddings* (see that head); observe that those made of flour and suet, or any kind of fat, should never be given to children under 7 or 8 years of age, and to these but little; Rice, Arrowroot, Sago, and other Puddings

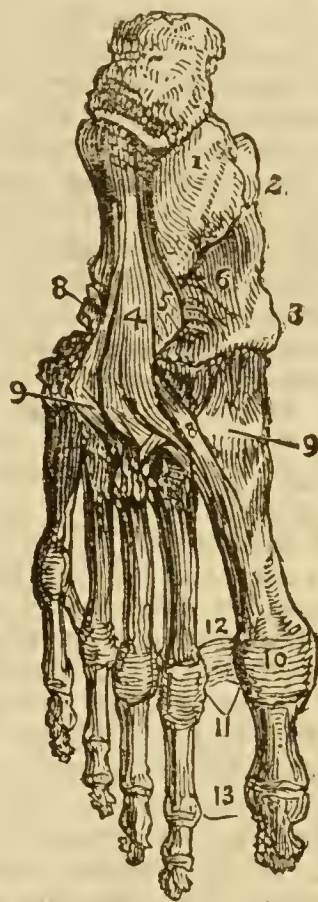
of that sort are best. Pie crust is but another name for poison.

Foot. (Latin *pes*.) The beautiful and complicated structure of the human foot, has often been dwelt on by anatomists, and, like the hand, so eloquently described by Sir Charles Bell, in his "Bridgewater Treatise," it is worthy of our most careful study and inspection. As the organ by which locomotion is accomplished, it is of the greatest utility to man, and, of course, its preservation from disease and injury, is to him of the utmost importance. We do not expect to make our readers acquainted with all the niceties of its construction; but we shall endeavour to give them some idea of the position and arrangement of its several parts, that they may the better understand the nature of the accidents which are likely to befall it, of the diseases to which it is subject, and thus be prepared to apply the proper remedial means, with sufficient intelligence to render them effective. We would call attention, first, then, to the bony structure and ligaments, as exhibited in the diagram annexed, which represents the sole or bottom part of the foot.

We should premise that the bones of the foot consist of the *Tarsus* or instep, *Metatarsus*, and *Phalanges*, or toes. The Tarsus is composed of 7 bones, namely, the astralagus, os calcis, navicular bone, cuboid bone, and 3 cuneiform bones; these are set together, so that they cannot be moved by any slight force, and yet have considerable elasticity. The astralagus is that on which, through the tibia—the great bone of the leg, best known as the shin bone—the weight of the body first falls. The os calcis is the heel-bone. The Tarsus and Metatarsus together, contribute to form an arch, of which the supports are the os calcis behind, and the ends of the metatarsal bones before; it is, indeed, a double arch, for it has at the sole a concavity both from back to front, and from side to side; and the strength with which its parts are joined is so great, that few accidents are rarer than a fracture or dislocation of any of the bones of the Tarsus.

The rest of the bones of the Foot, including those of the metatarsus and the toes, are in number, arrangement, and form, very similar to the metacarpus and phalanges of the fingers. The metatarsal bones, however, are longer, more slender, and set more closely side by side than the metacarpal; and the phalanges are all much shorter, and (except the two of the great toe) smaller. Their movements in general are the same as those of the fingers, but less extensive; neither is

there any adaptation for so free a movement of the first toe as of the thumb. Having thus pointed out the relative positions of the bones, we will proceed to speak of the ligaments with which they are connected, a reference to which in the diagram will give all further information which may be required as to the bones themselves. No. 1 is



the Os calcis; 2, the Astralagus; 3, the tuberosity of the Scaphoid Bone; 4 is the long Calcaneo Cuboid Ligament, a band of ligamentous fibres which proceeds from the under surface of the os calcis to the rough surface on the under part of the Cuboid Bone, its fibres being continued inwards to the base of the third and fourth Metatarsal Bones; 5 is part of the short Calcaneo Cuboid Ligament, which is situated closer to the bones than the long Plantar Ligament, from which it is separated by adipose tissue; it is broad and extensive, and ties the under part of the os calcis and cuboid bone firmly together; 6 is the Calcaneo Scaphoid, which, like the two last named, belong to the Plantar series of ligaments: this forms a broad band, which, passes forward from the hinder and inner border of the os calcis to the edge of the scaphoid bone, connecting these two bones, supporting the Astralagus, and forming part of the cavity in which the rounded head of the latter bone is received; 7 are the Plantar Tarsal Ligaments; 8 is the tendon of the Peroneus Longus Muscle; 9,

the Plantar Tarso-metatarsal Ligaments; 10, Plantar Ligament of the Metatarsal-phalangeal Articulation of the great toe; 11, Lateral or Side Ligaments of the same; 12, Transverse Ligament; 13, Lateral Ligaments of the Phalanges of the great toe; the same ligament extending to the other toes also. There are also 5 Interosseous (between the bones) Ligaments, which are not seen in the diagram: they are short and strong, uniting the several bones solidly together.

The movements of the Foot, which are effected by the several muscles, and permitted by their connecting ligaments and tendons, are—1st, between the Astragalus and Os calcis, a slight degree of gliding backwards and forwards, and from side to side; 2nd, a very trifling motion of the second range of tarsal bones; and adduction and abduction, flexion which increases the arch of the foot, and extension which flattens the arch between the first and second range. And this is the beautiful structure which is so commonly pinched up in tight boots, and misused in all kinds of ways, that, as an eminent surgeon has observed, "it is the rarest thing to find a Foot, the bones of which have not been injured by these malpractices." We would appeal to the common sense of our readers, and ask, is it is not far better to have a large foot, than a deformed one? better the free, bounding step of the red Indian, than the crippled gait of a Chinese woman, or a corn-afflicted votary of fashion. We have shown that the Foot is constructed on the principle of a double arch, one lengthways and the other across; when it is on the ground, and bearing the weight of the body, these arches are pressed out, so that they become nearly flat, but when the pressure is withdrawn, and the Foot uplifted, they again assume the arched form. Here is alternate expansion and contraction, for which there must be room, or there will be derangement of the machinery, such as we constantly see in the misshapen masses of bones, muscles, and integuments called feet, covered with corns, and morbid growths of various kinds, all the result of pressure, occasioned by shoes made too tight to admit of the necessary play and movement of the bones. If a person has naturally a large Foot, it is the veriest folly to attempt to make it small by compression; nature rebels at such an attempt, and avenges herself by distortion, and other pains and penalties, such as corns and bunions, and inflammation and swelling at the joints; if the shoe is too small, there will be bulging somewhere and a malformation, the instep will seem to be running over the top, and

the soles of the feet appear to be round instead of flat; the wearer will be afraid to step firmly and confidently, and there will be an end of all grace of motion, and comeliness of shape, in the part so tortured and afflicted. The general length of the female foot is from 9 to 10 inches, the width $2\frac{1}{2}$ or 3 inches, the circumference taken at the centre of the long arch may be 7 or 8 inches, the average of the male foot is about an inch more every way, and it usually is much flatter at the bottom; the arch is more flattened, permanently, because it has greater, and more constant pressure on it. The Medicean Venus never wore tight shoes, and her foot is like this, as nature moulded



it; had she been a representative of the Chinese standard of pedal beauty, she would have tottered upon clubs. Something between the two is the shape which modern civilization prescribes for our locomotive organs. Too commonly, from want of cleanliness, as well as from unnatural pressure, do the feet suffer; as a general rule we do not wash them often enough, they are so clothed and covered, that the perspiration cannot escape, nor is it absorbed so completely as in most other parts of the body, hence arises that unpleasant effluvia perceptible when the feet are uncovered. The only remedy for this is cleanliness; wash the feet every night in tepid water with soap, change the stockings often, and have two or three pairs of shoes in wear. *Damp Feet* should at all times be carefully guarded against, as they are likely to strike a chill to the system, which may set up Fever or other inflammatory disease. *Cold Feet* are indicative of impeded circulation; if they are habitually so, it is best to wear woollen socks, and to put them, on going to bed, in a mustard foot-bath, they should also be well rubbed with a flesh brush, or coarse towel; persons who are affected in this way, are generally troubled with *Chilblains*, (which see), also *Corns* and *Bunions*. For the accidents which are

likely to befall the Foot, see *Dislocations*, *Fractures*, and *Sprains*.

Club Feet, which we sometimes see in children, are nearly always congenital, that is, dating from birth; they are caused by the greater contraction of some muscles than others, by which the foot is drawn out of its natural position; it may be inwards or outwards, although the former is most frequently the case; or it may be a complete elevation of the heel, as in the following cut, so that the patient in walking rests completely on the toes; this is the most simple form of distortion; it is commonly called the *Horse Foot*, and is not so



frequently congenital as the other forms; it may arise from some disorder of the system, and especially from nervous irritation, like that produced by teething or worms: it is frequently accompanied by weakness of the ligaments of the ankle-joint, and in this case if not soon attended to, the foot is likely to become so distorted that the patient in walking rests merely upon the outer edge. *Splay* or *Flat Foot* may arise from nervous debility, or from the carrying of heavy loads, which necessitate a great amount of pressure upon the arch of the foot, which becomes flattened in consequence. There are many mechanical contrivances for the cure of these various deformities, which do not amount to malformations, as in most cases the bones are merely drawn out of their natural position; but the best method is that lately practised of a sub-cutaneous division of the contracted tendons; it is recommended by Mr. Tappin, Surgeon of the Royal Orthopædic Hospital, as well for infants of the earliest age as for those grown up;—"first, from the facility with which it is accomplished; secondly, because it incurs comparatively no risk, and scarcely any inconvenience;

and thirdly, because you at once overcome the principal resistance, and render the after-treatment painless to the patient, and comparatively easy to the attendant, independent of which the child is not subjected to such constant confinement of the limbs as is absolutely necessary when you do not have recourse to an operation. You can allow exercise to be taken for a certain time during the day—and that, even in infants, must have a most beneficial effect." Let every mother, then, who has a child with a deformed foot at once consent to the performance of an operation which is almost sure to be successful, and which involves at the time but little pain, which leaves no external wound, and involves no loss of blood (see *Orthopædy*).

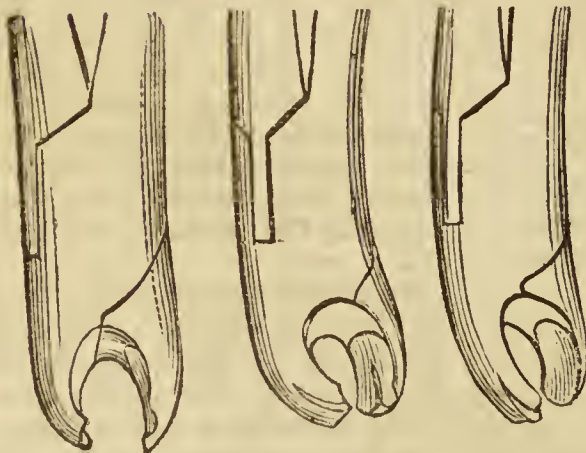
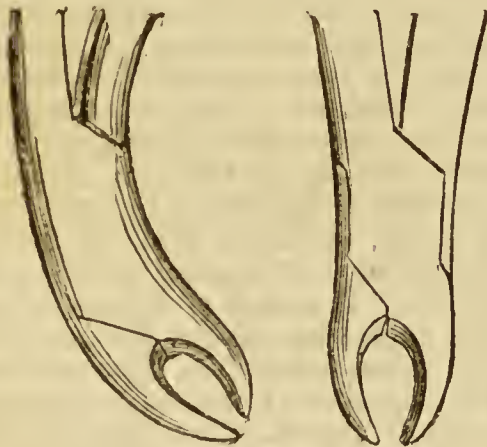
FORAMEN (Latin *foro*, to pierce). Hence we have *F. Monroianum*, an opening under the arch of the fornix, by which the lateral ventricles communicate with each other, and with the third ventricle. (See *Brain*.) *F. Soemmering*, or *centrale*, a circular opening at the hinder part of the retina, exactly in the axis of vision. (See *Eye*.) *F. ovale*, an opening situated in the partition between the right and left auricles in the *fœtus*. *F. rotundum*, the round aperture of the internal Ear, (which see). This and the preceding term are respectively synonymous with *Fenestra ovalis* and *F. rotunda*. *F. cæcum*, the blind hole at the root of the spine of the frontal bones, so called from its not perforating the bone or leading to any cavity. (See *Cæcum*.) *F. cæcum of Morgani*, a considerable depression of the *Tongue* (which see). *F. supra-orbitarium*, the upper orbital hole, situated at the ridge over which the eyebrow is placed. (See *Eye*.) *F. magnum occipitis*, the great opening at the under and fore part of the occipital bone. (See *Head*, *Skull*). Then, too, we have *F. incisivum*, the opening immediately behind the front *Teeth* (which see); and are several other smaller holes in various parts of the human body, to which the term Foramen is applied, but we need not particularise them.

FORCEPS. Are instruments commonly used in surgical operations of various kinds, and constructed according to the purpose for which they are intended; their chief intention being to hold substances which cannot conveniently be held with the fingers, the principle of construction is in all cases the same, being that of a pair of pincers with two blades, either with or without handles. The Forceps used in the operation for cataract are the smallest made; a larger size is employed for securing the mouths of arteries

that require a ligature round them; this instrument is provided with a spring catch, which keeps its points closed upon the artery; persons living at a distance from medical aid, and especially emigrating colonists, will do well to be provided with such, as in wounds involving the severance of an artery, it is comparatively easy, by this means, to stop the bleeding. The common dressing Forceps, found in every surgical case, are figured at page 199, under the head *Dressing of Wounds*.

For tooth drawing, Forceps have nearly superseded the use of the Key, and in the hands of a skilful operator it is a most efficient instrument; great attention is paid to the construction of these; they are of hard

as the handles—these are sometimes called Bone Nippers, a name which sufficiently explains their use; and larger Forceps for the extraction of polypi; and others of different sizes and construction employed in the operations of *Lithotomy* and *Lithotrity* (which see). There are also Forceps for *Craniotomy* (which see), and Midwifery Forceps, and small Forceps with very fine hollow, serrated points, very useful for the extraction of splinters. The following cuts are representations of some of the most approved forms used for these purposes:—1. Artery Forceps; 2.



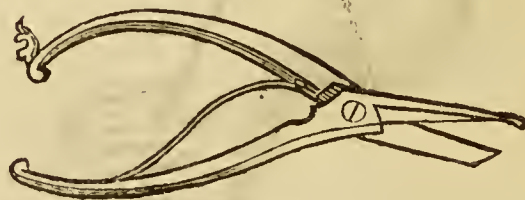
steel, beautifully finished and of various shapes, according to the particular teeth for which they are intended. The following cuts represent some of the forms in use; and under the head of *Teeth Drawing*, more probably will be given. There are Cutting Forceps constructed with the edges in the same line



2.



3.



4.



5.

6.



7.



Splinters; 3. Cutting (for removing starch bandages, &c.); 4 Polypi, or Hæmorrhoids; 5 and 6 Midwifery, 7 and 8 Craniotomy.

8.



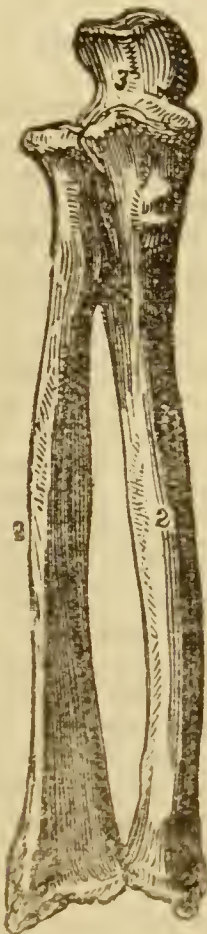
The derivation of the term Forceps appears to be from the Latin, *ferrum* iron, and *capio* to take, quasi *Ferriceps*.

FORMIC ACID (Latin *formica*, an ant). An acid emitted by ants when irritated; it contains a portion of Malic as well as Formic Acid; it is a colourless fluid, of a pungent smell, and acrid taste; it may be prepared artificially; neither it, nor the *Formiates*, which, combined with certain bases, it produces, are much used in medicine or the arts.

FORMIC ETHER. Is a colourless liquid, having a strong smell of peach kernels, and a very peculiar taste; it consists of Formic Acid and Ether.

FORMICA. Is a term applied by the Arabians to the disease now called *Herpes* (which see); its insidious, creeping character is supposed to have given occasion for the ancient name.

FORE-ARM. The lower part of the arm



between the elbow and the hand; it consists of two bones, as shown in the diagram, 1 being the *Ulna*, and 2 the *Radius*, 3 shows the joint or articulation between them and the upper bone of the arm; these bones are very liable to *Fracture*, (which see); in children, being soft and cartilaginous, they are often bent without being broken.

FORMULA (Latin *forma*, a form). The mode of preparing medicines as directed in the Pharmacopœia, or prescribed extemporaneously. See *Prescriptions*.

FORNIX (Latin for an arch or vault). A flat triangular medullary body, supporting the *septum lucidum* of the *Brain* (which see).

FOSSEA (Latin *fodio* to dry). A little depression or sinus; thus we have *F. hyaloidea*, the cup-like excavation of the vitreous humour in which the crystalline lens is embedded (see *Eye*); *F. lachrymalis*, a depression in the frontal bone for the reception of the lachrymal gland (see *Eye*); *F. navicularis*, the dilation towards the extremity of the spongy portion of the *Urethra* (which see); *F. ovalis*, the oval depression presented by the septum of the right auricle (see *Brain*); *F. pituitaria*, the *sella turcica*, a cavity in the sphenoid bone for receiving the pituitary body (see *Skull*).

FOUR TAILED BANDAGE. A bandage for the forehead, face, and jaws, sometimes called the Bandage with Four Heads (see *Bandages*).

FOURTH PAIR. The *Nervi Pathetici*, the most slender of any of the human body (see *Nerves*).

FOWL. We have spoken of Fish and Flesh, and must not omit the most aristocratic, if not the most generally useful of the grand dietetic trio. Than a young and plump barn-door fowl, there is perhaps nothing more delicious, as well as wholesome, in the whole range of culinary delicacies; the flesh is white and tender, not too fibrous, and has in it but a small proportion of the oleaginous principle; it is therefore easy of digestion, and may be taken by those with whom the strong meats would be apt to disagree: for those who after a severe illness, are just allowed to commence animal food, the broth and the flesh of the chicken is the very best diet that can be given, alternated, perhaps, with fish and tender mutton; it is not so stimulating to the system as the flesh of the larger animals, neither is it so nutritious; but it is as much as the weakened powers are equal to. Of Poultry in general, we shall speak more at large when we come to that head; in the mean time, we quote from Liebig's

"Chemistry of Food," an axiom in reference to this particular kind:—"In the boiling or roasting of Poultry, the flesh of which is white, and contains little blood, the temperature of the inner parts, when the flesh has been well cooked, seldom exceeds 130° to 140°. The flesh of Poultry or Game, is, therefore sooner dressed than flesh which contains much blood, as beef and mutton." We should observe, that the flesh of fowl is better boiled than roasted for invalids; and there is the additional advantage of using the liquor as *Broth*; (for the preparation of which, see that head). The following is a good recipe for *Chicken Panada*, an excellent food for invalids, containing much nourishment in a small compass:—"Boil a chicken till about three parts ready, in a quart of water; take off the skin, cut the white meat off when cold, and put into a marble mortar; pound it to a paste with a little of the water it was boiled in; season with salt, or grated nutmeg, and the least bit of lemon peel: boil gently for a few minutes to the consistency you like; it should be such as you can drink, though tolerably thick."*

FOWLER'S SOLUTION. This preparation was first introduced in legitimate practice by Dr. Fowler, of Stafford, as a substitute for "the Tasteless Ague Drop;" at one time a highly popular nostrum. Dr. Fowler's is a solution of the Arsenite of Potash, coloured with Compound Spirit, or Tincture of Lavender; one drachm of it contains $\frac{1}{2}$ a grain of Arsenious Acid. See *Arsenic*.

FOXGLOVE. A plant of the natural order *Scrophulariaceæ*, called by botanists, *Digitalis Purpurea*: properties narcotic, diuretic, and sedative, generally causing a marked diminution of the force and frequency of the action of the heart. In undue vascular excitement, in heart affections generally, in some fevers, in inflammations, as well as in hæmorrhages, in dropsy, phthisis, epilepsy, and scrofula, it is very useful, but its action must be carefully watched, and its use suspended as soon as it affects the head, stomach, or kidneys. The dose of the Powdered Leaves is from $\frac{1}{2}$ a grain to a grain, gradually increased to 2 or 3 grains; of the Infusion from 2 to 4 fluid drachms, increased to a fluid ounce, and sometimes half as much more; Tincture, from 10 minims, very carefully, to 20 or 30; Extract, $\frac{1}{2}$ a grain to a grain. There is a Pill of Digitalis with Squills, according to the Edinburgh Pharmacopœia, of which from 4 or 5 to 10 grains may be taken at bed-time; it is a good soothing expectorant.

* For other useful receipts of the kind, see "Wife's Can Book of Cookery."—Ward and Lock.

In the form of Ointment, Foxglove is applied to scrofulous sores with good effect; the Tincture, with Soap Linament, may be rubbed into the chest or other parts to relieve pain; and a strong Infusion of the



leaves may be applied warm to the abdomen to produce diuresis in dropsy. The active principle is extracted in the form of *Digitaline*, said to be 100 times as strong as the powdered leaves: dose 1-65th of a grain. It may be had as granules, each containing the above quantity; 2 or 3 of these may be taken per day. See *Digitalis*.

FRACTURE (Latin, *frango*, to break). One of the commonest accidents to which all are liable, is a fracture of one or other of the bones, which is often produced by a slight fall, or some other trifling accident, especially in very cold weather, when the bones are more brittle than at other times; and yet very heavy falls frequently occur without a fracture of any part of the osseous system, that being the result of some sudden concussion, or violent strain upon a part of the frame which is unable to bear it, consequently snaps short off; breaking more longitudinally, generally, in this case than in splinters. According as a fracture has a *transverse*, *longitudinal*, or *oblique* direction, in relation to the axis of the bone, it is distinguished by these terms: it is also called,

1st., *Simple*, when the bone only is divided, without external wound; 2nd., *Compound*, when there is the same kind of injury, with laceration of the integuments; 3rd., *Comminuted*, when the bone is broken into several pieces; 4th., *Complicated*, when attended with disease of the part, contusion, or other mischief. Then we speak of the *causes* of fractures as, 1st., *Predisposing*, with regard to the age, &c. of the patients, their diseases, and the situations and functions of the bones involved; 2nd., *Remote*, as regards the external force of falls, blows, &c., or the violent action of the muscles, attached to bones. And, again, for the reduction of fractures we make use of, 1st., *Extension*, which means the act of pulling the broken part in such a direction as to extend the muscles, and bring the ends of the bone into their natural position; 2nd., *Counter-extension*, pulling or extending in the opposite direction, in order that the extending power may not draw along the whole of the fractured limb, and thus prevent the desired object of bringing the two ends of the bone together; 3rd., *Cocaptation*, or setting, that is, the act of placing the broken ends in their proper situations. When Fractures occur in, or near, the middle of the long bones, such as those of the leg, thigh, arm, or fore-arm, they are readily detected, even by the eye and hand of one unskilled in anatomy: there is always great pain and loss of power over the portion of the limb below the Fracture, which will hang loosely, and may be moved in almost any direction; without reference to the proper action of the joints; the broken ends of the bone, too, will be quite perceptible to the feel, and there will be a grating sound when they are moved about, called *Crepitation* (which see). In many parts, however, as near the joints, and where there is much muscle, the symptoms are not so plainly marked, and it is often extremely difficult for even a surgeon to make out the exact position of a Fracture, even if he has sufficient assurance that such is the nature of the injury, and this difficulty is increased by the swollen and inflamed state of the parts.

The desirability of obtaining professional assistance in all cases where there is a likelihood of a Fracture having taken place, must be so evident to our readers, that we need scarcely insist on it; frequently, however, this cannot at once be procured, if at all; it therefore behoves those who would stand prepared for such an emergency, to make themselves acquainted with the principles of treatment, and modes of operation necessary in cases of this kind. We shall

endeavour to furnish just the information which may be required, to enable a non-professional person to treat a real or suspected fracture; if not exactly *secundum artem*; yet so as to give the patient a chance of obtaining relief from his pain, and perhaps a cure for the injured part. Our readers will be all the better prepared to receive and apply this information, if they understand something about the process by which Nature repairs the injury done to the bone, and by implication, to the whole frame, by a Fracture. The union in this case, does not take place by adhesion or granulation, like that in which some soft parts of the body are divided; neither is it, as some have supposed, by the effusion of blood in the intervals of the broken ends of the bones, and its subsequent organization; it being quite certain that bone will unite when no blood is effused, and that when it is, absorption often takes place before the process of union commences. The true explanation of the matter seems to be this—Inflammation is set up, as a first step to the repair of the injury, about the seat of which a considerable swelling occurs; this is generally hard and firm, and hence it has been technically called *Callus* (which see.) By this term, too, we understand not only the outward swelling and irregularity, but also the internal effusion of substance, by which the Fracture of a bone is consolidated; thus we speak of bones being united by *callus*, and when we proceed to inquire into the process by which this union is effected, we call it an investigation of the formation of *callus*. The notion is entertained by many that a gelatinous fluid, the result of inflammatory action, is poured into the space, between the broken bones, and becoming organized, as it were, glues them together, until by the effusion of the mineral elements deposited by the blood vessels which run through the substance, it ossifies, and makes the broken bone as firm and sound as before. But this like the sanguineous effusion theory, will not bear the test of modern science. The French chemist Dupuytren, who has directed particular attention to this subject, has discovered that when two ends of a broken bone are brought together, and maintained in accurate apposition, they become, in the first instance, united by a swelling, which consists of the periosteum, the cellular substance, the muscles, and other soft tissues about the injured part; this swelling forms a kind of tumour, which is thickest around the fracture, and gradually diminishes on either side, until lost

in the natural surface of the bone, whose broken ends are held together by this case, if we may so call it, until they become consolidated by the ossification of the intervening substances. *Cal provisional* and *cal definit* (the provisional and definite callus) are the names given by Dupuytren to the first union, produced by the swelling, and the second, by ossification of the bone. The second process generally commences from the 20th to 25th day after the occurrence of the accident, and extends from the 40th to the 60th day; but it may be much retarded by constitutional weakness, or other unfavourable circumstances; so that, in some patients, it is several months before the ossification becomes firm enough to use the injured limb in the most careful and gentle manner. By the end of the fifth or sixth month, the external swelling has become completely ossified, and a bony connection has taken place between the broken ends, so that, if sawn through, a faint line only marks the situation of the Fracture. Generally, by the end of the first year, the external, or provisional callus is entirely absorbed, and the bone has become so firmly united that it can be more easily broken at another place than at the seat of the Fracture. Thus it is that Nature repairs broken bones, leaving to man the task only of keeping the two ends in proper apposition, and affording to the system due rest and nourishment, without which she will refuse to perform her part of the duty—that is, in a workmanlike manner. It sometimes happens that the broken ends of the bone are not properly brought, or kept together; and even in this case, an union will probably be formed, but it will be by means of the first, or provisional process, only, and the swelling—the external callus—becomes ossified, and permanently remains. Perhaps the ends of the bone may even ride upon, and overlap each other; sometimes they are an inch or two apart, and yet the bone becomes consolidated, so that the patient can use the limb almost as well as if there had been no Fracture, so extensive are the resources of Nature. Such a connection as this, however, is generally very inconvenient to the patient, and a sad eyesore to the surgeon; and when, from neglect in the first instance, or restlessness, or other cause, it has occurred, or is likely to occur, the latter generally prefers to fracture the limb afresh, in order to effect a more sightly and convenient union; and it is best to let him do so, if sufficient reliance can be placed upon his skill and experience. It must not always be concluded that because the bone of a

limb has received extensive injuries, amputation is necessary; better a natural limb, although it be somewhat stiff and misshapen, than an artificial one, however, beautifully made; Nature, we have seen, is fertile in expedients, and there are extensive powers in bone for repairing injuries. Still, there are many cases in which the removal of a fractured limb is absolutely necessary for the preservation of life; so it is, when mortification and gangrene ensues, then the saw and the scalpel must be resorted to, and the danger of a formidable operation boldly met; loss of limb is a less evil than loss of life; both alternatives are dreadful; but how much more so is the latter than the former; besides, our life is not our own, and we should make every effort to preserve it until it pleases God to call upon us to lay it down in a manner most imperative and unmistakeable.

From these general observations, our readers will have been able to get some idea of what a Fracture really is, and of the process by which Nature effects a repair of the mischief resulting from it; the great practical rules to be observed in the treatment, are to bring the ends of the broken bone in close proximity, and to guard them from all disturbing influences. Various mechanical contrivances are used for this purpose, of which we shall speak as we proceed in our description of the different kinds of Fracture to which the human frame is liable. To begin with one of the smallest:—

Fracture of the Finger. After employing extension, and thus bringing the ends of the bone together, place a small smooth piece of deal, or of gutta percha, on the under, and another on the upper side, and proceed to bandage somewhat tightly, so as to keep the finger extended; put the arm in a sling, and keep it so for about a month: if the injured part swells and becomes painful, the bandage must be loosened, and a cold lotion applied; this is generally by no means a difficult case to treat.

Fracture of the Metacarpal Bones—these bones, which intervene between the wrist and the fingers, should be treated in this manner. Place in the palm of the hand a soft, but firm, spherical body, and, closing the fingers and thumb over it, in a grasping position, keep them so with a bandage; by this means the natural arch is preserved, which it will not be if flat splints are applied; in this case, too, the arm had better be slung, and from a month to five weeks will be the time required to effect a union.

Fracture of the Fore Arm may be either of the *ulna* or of the *radius*, or of both the

former is the outer and thicker bone of the two (see accompanying diagram A, No. 1),

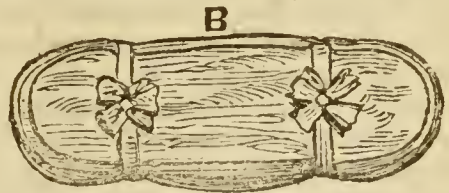


A

and the fracture of this does **not** much disturb the general outline of the arm; it may be broken at any part of its length, or at the elbow process, called *Olecranon* (3), or at (4). In the first case the plan will be to bend the elbow, and bring the hand into such a position that the thumb points upwards; use extension until no unevenness can be discovered in the course of the bone, and then apply two splints, the inner one reaching from the bend of the elbow to the tips of the fingers, and the outer from a little beyond the elbow to the middle of the back of the hand, which should be raised well towards the chest, so as to make a sharp angle, and draw the ulna from the radius. When the Fracture is in this latter bone (2), the same method must be adopted, only that the hand must be depressed instead of raised, in order to keep the two bones apart. When these are both fractured, the setting is, of course, more difficult, and much time has often to be spent in extension and manipulation, before the four broken ends can be brought properly together; the splints should be put on as above directed, bandaging the hand firmly to the longer one, and placing it so that it

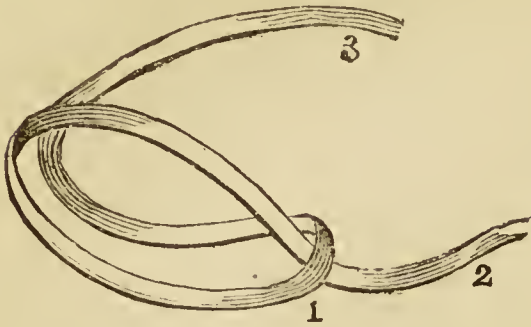
is neither raised nor depressed, but in a right line with the axis of the arm. When there is Fracture of the olecranon there is little or no power of extension in the elbow, behind which a bony lump may be felt: a true osseous union in this case is scarcely to be looked for; but the injury will probably be repaired by a band of ligament. There is commonly inflammation and swelling, which must be reduced before pressure can be applied; the arm should be kept straight, and wet with cold lotion; and apply a splint as soon as it can be borne; let it be a long one, reaching on the inside from the shoulder to the hand: bandage the arm in a straight position, beginning from the top, and making, as you go, extension downward, so as to get the broken bone into its place; it is long ere the limb is in a serviceable condition after a fracture like this. When the coronoid process is broken the matter is more easily managed; the forearm must be bandaged in a bent position, and kept so; in about a month slight exertion of the limb may be allowed, but there must be great care taken that it is not too violent.

Fracture of the Humerus, or Upper Arm-bone, very commonly takes place in the shaft, on any part of which, within an inch and a-half of either extremity, it is easily detected by the mobility of the limb at the seat of the injury, and the patient's incapability of raising the elbow; the broken ends of the bone, too, may readily be felt, and the crepitation heard, when they are rubbed together. In this case, two wooden splints will be required, one to go before, and the other behind; or, if the arm is very muscular, four may be necessary to embrace it properly; they should be padded with tow, wadding, or lint, as here represented, and

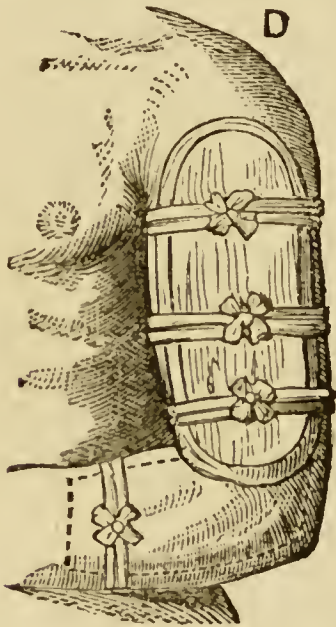


furnished with tapes, to buckle, or tie, as may be most convenient; the padding should be placed upon a soft piece of calico or linen, a little longer than the splint at each end, and three times as broad; turn in the ends and sides, so that the pad is a little larger than the splint every way, and about half an inch thick, and make all fast by tacking; place the turned-in ends of the calico next the wood, so that there is a smooth surface presented to the skin. The tapes, three in number, are put on to the splints double, so that there is a loop at one

end 1), through which, after it has encircled the limb, the other end is passed (2),



then drawn tight, and tied to the remaining end (3) with a bow-knot, as shown in diagram: a bandage, very easily loosened, may be made in this way of a strip of calico or broad tape. The setting of the bone is



not difficult in this case; the ends are easily brought together, and being so, the splints may be placed, and made firm by means of the looped tapes; these should not, at first, be drawn tighter than is required to keep the splints right, and prevent movement of the arm. After the first few days, when the swelling has subsided, a more permanent investment of the limb may be made. First give it a pretty firm roll of bandage, then place two splints, one on each side, of stout pasteboard, gutta percha, or leather, cut so that they will come down and cover part of the forearm, as represented by the dotted lines in diagram D. These splints should have been previously shaped, or moulded, to the sound arm, and should be well fixed by more bandage, which, as it is rolled, should be brushed over with starch to prevent its slipping. Sometimes, where there is not much muscle, the starch bandage is alone used; but, in this case, the whole of it must be well saturated with strong starch, paste,

gum, or white of egg, with strips of brown paper stuck down across the folds here and there. Care must be taken not to move the arm until all this is dry and firmly set. The hand and wrist must be supported with a sling, but the elbow had better hang free, as its weight will tend to keep the bone straight and the muscles extended.

Fracture of the Neck of the Humerus is that which takes place when the upper extremity, or head, is broken off. The symptoms here are very much like those which attend dislocation of the shoulder, and the treatment must be much the same. Draw down the shaft of the bone, and push up the head by means of a pad in the arm-pit; then bringing the arm close to the body, with the lower part at right angles with the upper, fix it to the chest by a splint on its outside, and a long bandage encircling it and the whole body. See diagram E.

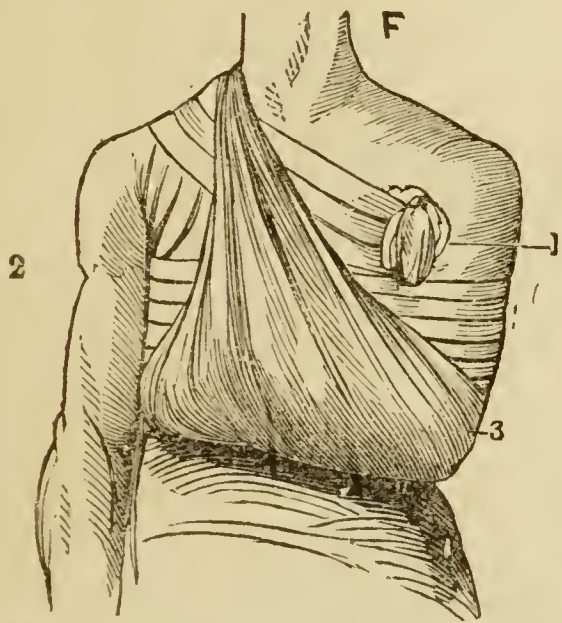


Fracture of the Condyles. This is when the lower part of the humerus is the seat of injury, the condyles being the rounded eminences which fit into the socket-like hollows at the head of the ulna to form the elbow joint. In this case, there is unnatural mobility about the elbow, and a hollow behind and above it, by which we know that Fracture has occurred, although we may feel that the bones of the forearm are quite sound; however, none but a skilful anatomist can make out exactly its extent and direction. In any case, the best treatment is to bend the elbow to a considerable angle, and keep it so by means of bent splints of gutta percha, or millboard, moulded to the shape, the first being softened by heat, and the last by moisture. Bandage, and keep all quiet until the adhesion of the bone takes place, then put the

arm in a sling, and let it remain thus supported for a month or six weeks.

Fracture of the Shoulder-blade may be caused by a severe blow or fall; it most commonly happens near the neck, and is very likely to be confounded with dislocation of the shoulder, or fracture of the neck of the humerus, like which it should be treated, only that the arm, instead of being drawn down, must be supported. It sometimes happens that what are called the *acromion* and *coracoid* processes are broken off, and in this case a different treatment is required; but this is of rare occurrence, and can only be detected by a surgeon.

Fracture of the Collar Bone is, perhaps, one of the commonest accidents of the kind that can happen, and one of the most easily detected; it is generally occasioned by a blow on the shoulder, which falls forward, pushing the ends of the broken bone one over the other. The main object in the treatment must therefore be, to keep the shoulder back until the bone has united, and become sufficiently firm to do this without artificial aid. This end is accomplished by various means, but the plan recommended by Mr. Liston is, perhaps, the most simple and successful for unprofessional adoption. (See diagram F.) A wedge-shaped pad of any



soft material—a pair of old stockings, for instance—is made, and put in the middle of a small shawl, or a large handkerchief; it is then placed well under the arm, but on the injured side (1); the ends of the envelope are brought, back and front, over the opposite shoulder, then crossed, and tied beneath the sound arm (2); another broad bandage of some kind is then passed several times round the body and injured arm (3), so as to bind the latter closely to the former

in such a manner that the pad beneath the armpit acts as a fulcrum, and allows the outer end of the broken collar-bone to be pulled backward and outward during the process of binding, which, when completed, sets it fast in the right position; we have then only to envelope the whole of the forearm in a sling, and the apparatus is complete; it should be worn a month at least. If the arm exhibits a tendency to swell, it must be bandaged from the fingers upwards.

Sometimes the collar-bone is broken externally, near the point of attachment to the coracoid process: in this case there is scarcely any displacement of the fractured ends, and little need be done beyond keeping the patient quiet, and slinging the arm. In any fracture withinside of this point, the arm falls down, and is drawn inwards, and the above should be the plan of treatment.

Fractures of the Ribs are of not unfrequent occurrence; they commonly result from a fall or blow, and may be complete or only partial, involving one or more of the bones. The *symptoms* are, a sharp pain felt at the injured spot, especially in breathing and coughing; irregularity to the touch; and distinct crepitation. The chief risk involved is injury to the lungs, from the sharp ends of the bone, and consequent inflammation; hence it is usual to bleed patients after this accident if the system will bear depletion; leeches are sometimes applied to the seat of pain, and hot bran bags. A band of stout calico or flannel, from 8 to 10 inches wide, should be passed round the chest several times, beginning close under the armpits and going down to the end of the ribs; it should be drawn so tightly as to keep the ribs from rising and falling in the act of respiration. The patient should be kept perfectly quiet, and on low diet, for a fortnight at least, assuming the position which is found most easy, which will probably be a half-sitting one, supported by pillows.

Fracture of the Lower Jaw sometimes occurs from a blow on the face, and in extracting a tooth. The nature of the mischief in this case is sufficiently evident; the crepitus is distinct, and the Fracture can be felt. Professor Fergusson's treatment is the simplest and surest. Cut two narrow wedges of cork, an inch and a-half long, a quarter thick at the base, and sloping away to an edge; place them between the teeth, one on each side; warm a piece of gutta-percha, or soften a piece of thick pasteboard in water, and mould it to the injured jaw, and keep in its place by means of either of

the head bandages figured at page 77. This must be tight enough to prevent any motion in the jaw; the cork wedges will keep an open space between the teeth for the passage of food, which must be in a liquid form; the mouth should be rinsed frequently with a lotion of Tincture of Myrrh and Water, in the proportion of 2 drachms of the former, to $\frac{1}{2}$ a pint of the latter.

Mr. Wilkinson, surgeon, of Sydenham, reports a case of this kind which is worth recording, as an example of what wonders may be effected by the curative processes of Nature, aided by skilful scientific treatment:—

“J. M——, aged 56, whilst engaged in breaking in a newly-shod colt, on the 22d of January, received a violent kick upon the face, which knocked away several pieces of the alveolar process, with the upper and lower incisors and canine teeth, cutting through the lower lip, leaving an angular piece hanging, exposing the jaw, and fracturing the bone through one inch from the median line of the chin. The blow was given somewhat sideways, the whole of the face being much cut and contused, the nose only being saved by being included in the hollow of the horse's foot.

“The accident was witnessed by some of the neighbours, who removed him from the snow, which was fortunately thick upon the ground at the time, and I saw him about fifteen minutes after, when he had recovered from a partial state of insensibility. The loose pieces of bone were removed, the fractured ends of the bone reduced and placed in apposition, and a gutta percha chin-piece, padded with soft lint, was made and adapted (by means of modelling with hot water) so as accurately to fit the chin, and fixed with bandages.

“Great inconvenience was now experienced by the oozing of saliva and blood from the wound of the lip, which was remedied successfully by the application of collodion mixed with a portion of oil, to prevent its cracking.

“The patient was restricted to a diet of beef-tea, soup, gruel, milk, &c., and, with the exception of an attack of gout, to which he is liable, has progressed well.”

The accident, we see, happened in January; in May the surgeon writes:—

“The bone is now consolidated; he is able to eat well, and has regained his usual health, with little or no deformity beyond the loss of his teeth.”

No case of Fracture should dishearten us after this.

Fracture of the Nose may easily take

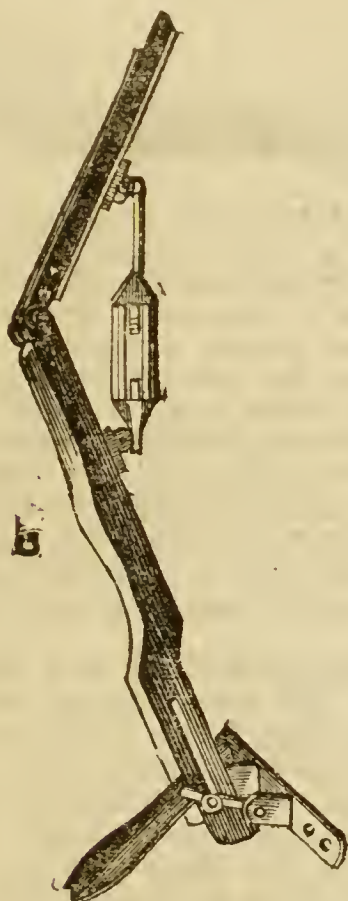
place, on account of the prominence of the feature, and the thinness of the bones. When any of these are broken, there is nothing to be done, save to elevate them from the inside, by introducing some smooth instrument, such as a probe, or netting-pin. If the broken pieces of bone are kept in their places by means of sticking-plaister, they will quickly unite, and little or no disfigurement may be the result; the necessary replacement should be effected before inflammation sets in, and cold lotions applied to the part, while there is any redness or swelling.

Fractures of the Skull are generally attended with injury to the brain, and are always very serious affairs, on account of the concussion which takes place, and the amount of cerebral mischief arising out of this. Domestic treatment can do little here; pending the arrival of the surgeon, the hair should be cut closely off about the seat of the injury, and cold lotions applied. It is not always easy to ascertain whether the skull is really fractured, as a simple crack will be likely to escape notice; but very commonly there is a depression, and sometimes a portion of the bone is driven out of its place, exposing the *Brain* (which see), and *Skull*.

We have now to speak of those Fractures to which the lower parts of the body are liable, one of the most common of which is

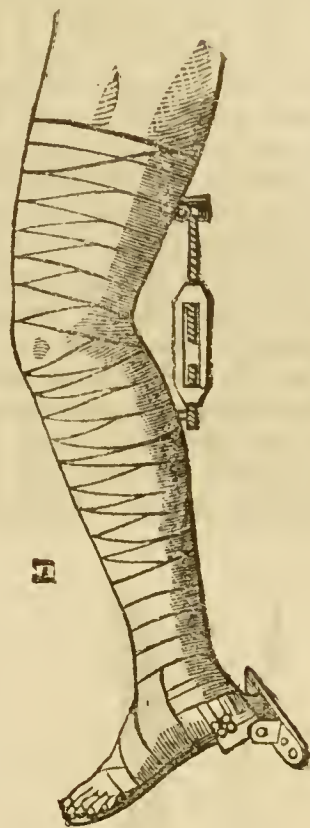
Fracture of the Leg. In this limb, as well as in the fore-arm, we have two bones, either or both of which may be broken: the outer or main bone is called the *tibia*, and the inner or “splint” bone is the *fibula*; the knee-joint is formed by the first alone, but the second takes part in the formation of the ankle-joint. A reference to the article *Leg* will show the exact positions of these bones, rather above than below the middle of which Fracture most usually occurs. When the fibula alone is broken, the setting is not a difficult matter, for the tibia acts as a splint to keep it in its place; but it is so well protected by muscles and its position, that this seldom occurs. Should the tibia be fractured, the fibula supports the limb, and prevents any muscular contraction or displacement. The Fracture in this case can be easily discovered; there is distinct crepitus, and an unnatural prominence or depression felt, in passing the hand carefully along the shin. The Fracture of the fibula is more difficult of detection, especially if it be in the upper part; but this is very rare. When it does occur, it is generally near the lower end, where it may readily be felt, even through the swelling,

which is almost sure to supervene. When both bones are broken—and this is the most common occurrence—there will be a change in the direction of the axis of the leg, the upper part of which does not answer to a movement made in the foot, which, when left to itself, falls below its proper position, usually with the toes turned out. In this case, the most convenient mechanical appliance that can be used is Liston's leg splint, which we have here figured; it is a light framework



of iron, in two distinct portions, joined together at any angle by a rod, which can be extended and contracted, according to the requirements of the case; the lower portion is furnished with a foot-piece, which, by means of a thumb-screw in a slide, shifts up or down, and to this the foot is securely bandaged, as shown at diagram H. Great care must be taken, before thus confining the limb, to get the broken bones in their places by a little extension and movement of the foot, which also must be placed in a natural position on the foot-board, and prevented slipping off by a heel-piece of leather nailed on; this must be padded, as must also the parts on which the leg and thigh rest, or the long-continued pressure may cause sores. When there is much swelling in the limb, it should be allowed to lie on the apparatus without any bandaging, except to the foot, for some days,

until, by the use of cold lotions, the inflammation is reduced.

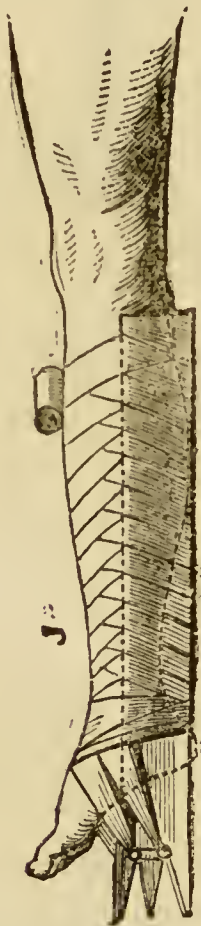


By this apparatus it will be seen that the injured limb can be easily raised or depressed, and placed in any desired angle, and this principle should be applied to any instrument contrived for setting a fractured leg. Sometimes the limb is kept constantly flexed on double or triple inclined planes of splints, resting on a frame, capable of extension or contraction. Sometimes the limb is slung from above; but the old-fashioned straight splint, against which many objections may be urged, is still used in most of the London hospitals, and this would probably be the most readily available in domestic treatment. It is shaped thus—



and should be sufficiently long to extend from a little above the knee to four inches beyond the sole of the foot. It may be quickly made by any carpenter, out of half-inch deal, planed smooth; the breadth should be about three inches; this must be padded throughout its whole length, except the notched end, which is to project beyond the foot, with tow, lint, or other soft material, taking care to have the pad thicker at the lower part, to suit the diminution in

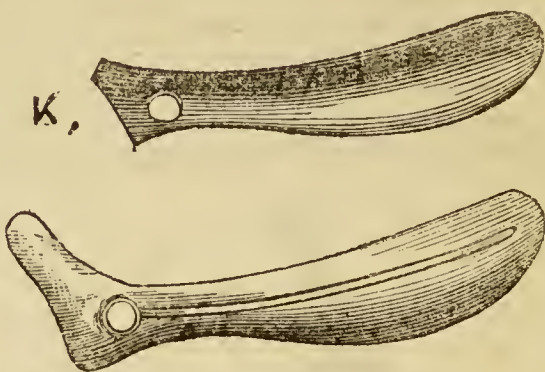
the size of the leg. This splint must be carefully placed against that side of the limb from which the foot exhibits a tendency to turn. We will suppose that a stout calico bandage, about $2\frac{1}{2}$ inches wide, and 12 inches long, has been provided; with this, beginning at the foot, and bringing it down from the instep between the notches at the bottom of the splint, envelope the limb evenly, fold over fold (as directed under the head of *Bandages*) up nearly to the knee, just below which a broad piece of tape should be passed, with the ends through the holes in the top of the splint, which ends are to be firmly tied at the moment when extension of the limb is made by an assistant; the bandage is then to be carried on over the head of the splint, and made secure. In diagram J we



see the limb, before this process is completed. When both bones are broken, it is generally necessary to apply the angular splint adapted to the ankle, of which diagram K exhibits the outer and inner sides.

Fracture of the Knee-Pan sometimes happens from the mere muscular exertion of kicking or throwing out the leg violently; it may be at once detected by the depression in the bony plate, and separation of the broken fragments; these cannot be kept in close apposition, and the injury is made

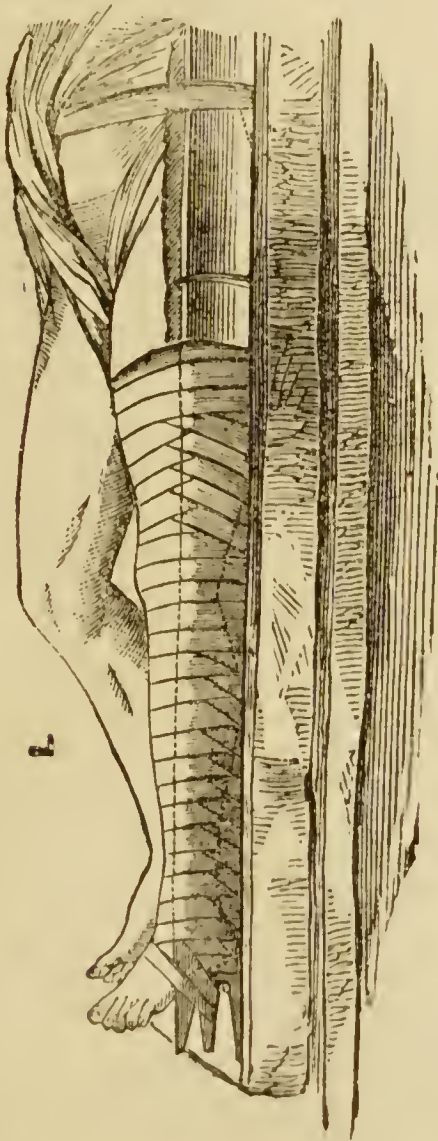
good by a ligamentous band, which connects them; to facilitate this process, the leg should be kept in a straight position, above the level of the hip, so that the muscles of the thigh, which are attached to the upper



edge of the knee-pan, may be relaxed. A long splint, bound beneath the leg from the thigh to the foot, will effect this object; or Liston's apparatus, elevated. Over the broken patella, a piece of calico is bound, and the knee is bandaged tightly above and below this, so as to bring the broken pieces as closely together as possible, and to keep them so. The bandage will have to remain on probably for two months, as a Fracture of this kind unites very slowly; the knee is generally weak after, and it is best to support it with an elastic knee-cap.

Fracture of the Thigh is a very serious accident; the bone may be broken just above the knee, in the shaft, or near the neck. In the first of these cases the nature of the injury is sufficiently obvious, as the broken bone can be felt beneath the skin; this also is the case with the second, in which, as in the third, there is shortening of the limb, and generally turning out of the foot. This accident may be readily distinguished from dislocation of the hip, by the mobility of the hip joint. There is always much difficulty in keeping the ends of the bone in apposition here, in consequence of the power exerted by the muscles of the thigh, which are constantly pulling lengthways, and causing the ends to overlap, or, as we say, "ride" upon each other; this is especially the case if the fracture is oblique. It is best to use the long straight splint first, in either of these cases, and to put it on with a light bandaging, gradually tightening it, to accustom the limb to the pressure; the splint must be made in the same way as that figured in diagram I, but much longer, reaching from the hip to beyond the toes. When inflammation has subsided, and the pressure can be borne, the case had better be treated in this way:—Let the patient lie on a hard

mattress, with the leg extended and uncovered; then commence operations by bandaging the leg evenly from the toes to the knee; then place the splint, previously well padded, in its place, and make it fast with rollers to the foot, ankle, and leg, taking care that the former is in the position which it is to occupy—that is, pointing straight upwards; next take a silk handkerchief, in the middle of which some wool has been rolled up, to make it of considerable thickness, and pass it between the legs, bringing one end up behind, and one before; these ends pass through the holes at the top of the long splint, and tie them as tightly as possible, without displacing the Fracture; then, after confining the splint to the waist, with a bandage, insert a short stick between the loop of the handkerchief, and give two or three turns; this will have the effect of shortening the hand-



L

kerchief, and pulling down the splint, which will carry with it the part of the limb attached to it below, producing the

necessary extension; keep on at this, until you find that the injured leg is as long as the sound one; and when this is the case, lay a short splint along the inside of the thigh, and bandage tightly and smoothly, from the knee up to the hip. When it is completed, the patient will appear as in diagram L; the extension must be kept up for about 6 weeks, at the end of which time the Fracture may be sufficiently united to bear the strain of the muscles upon it.

Fracture of the Pelvis sometimes occurs in falls from great heights, or in being run over, or having some crushing weight thrown upon the body: when it occurs there is generally serious injury to the viscera of the abdomen and pelvis, indicated by the passage of blood from the bladder and bowels. The nature of the mischief in this case is not easily detected, and little can be done beyond enjoining perfect rest and a lowering diet, unless there are symptoms of collapse, in which case stimulants must be given.

Fracture of the Spine does not often occur, but when it does there is little hope for the patient; in this case there is pressure upon the spinal chord, causing paralysis of the lower extremities, or if it should happen high up, of the arms also. Rest and stimulants may be here recommended, chiefly, perhaps, because one likes to make an effort. (See *Paralysis, Spine.*)

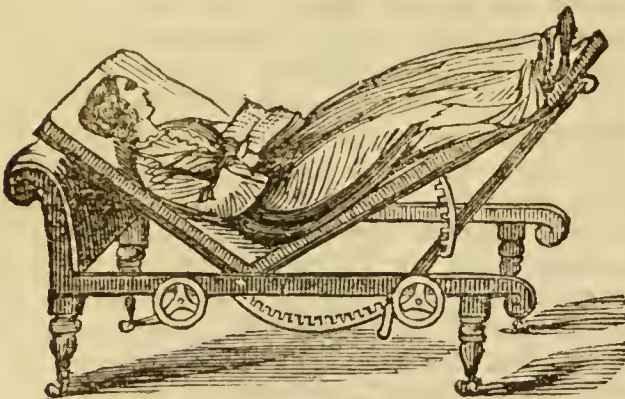
There are many other mechanical contrivances for the treatment of Fractures to which we might allude, but they are interesting chiefly to the profession, and more adapted for hospital than private practice. We may just mention two or three of those that appear to us most deserving of note:—

Salter's Fracture and Dislocation Apparatus consists of a metal cradle suspended from a smooth bar, along which glide two pulleys; this bar forms the top of a light framework supporting the apparatus. The leg is placed in this cradle, which swings to and fro, or moves backwards or forwards, with the slightest movement of the body, so as to admit of change of position without disturbing the Fracture; it is made in several parts, to facilitate the operation of dressing, &c., in compound Fractures. There is also a useful metal splint by the same inventor, adapted for Fractures of the leg, and one somewhat like Liston's, but capable of extension and contraction, as well as elevation, and of adaptation to all Fractures of the extremity; these may be had of Mr. Coxeter, Surgical Instrument maker, of London. There is also a "Fracture and Invalid Bed," which may be had on hire

of Messrs. Wilson and Co., 144, High Holborn, London, which has many advantages, one of them being that, by a simple process, the whole body of the patient, may be elevated out of the way



without disturbance, when it is desirable to make the bed. Various kinds of couches are also made, in which the patient can be placed in any desired position. The adjusting couch, patented by Mr. Kirby, is one of the best of these. We give a cut



of this useful article in one of its forms of adjustment, as exhibiting the angle of elevation at which it is desirable to keep the leg in Fracture of the knee-cap.

Quite recently, Winchester's new method of treating Fractures has been introduced: he thus describes his apparatus:—"My invention consists of joints of wood, metal, or other suitable material, and of convenient length, which have the power of being fixed at any desired angle. By this arrangement, we are enabled to take and retain the exact

shape and form of any portion of the human body, thereby forming a perfect model of the sound or healthy part, and consequently a complete support for the corresponding injured or diseased part. Its advantages are these:—It gives confidence and certainty to the surgeon in the treatment; and, being applicable to all cases, and exceedingly portable, effects a great saving of time. A full-sized splint can be folded into a space of 15 inches, by 3 wide and 3 deep, and can be carried round the waist as a belt, or in the pocket."

There appears to have been lately in our hospitals a tendency to simplify splints and other Fracture apparatus; the general idea being simply kept in view to secure quietude and coaptation of parts, without pressure or obstruction of the venous circulation. Bags of sand, and starch bandages, are much used in lieu of more complicated apparatus; and these answer well where the case can be carefully watched by surgeons and nurses, and any displacement at once adjusted. Many, very many, cases of Fracture, are obliged to be left wholly, or almost so, to unprofessional management; how important is it, therefore, that this should be careful and intelligent, and that the general principles of treatment should be well understood. A little inattention, or a slight mistake, may not only greatly increase the present sufferings of the patient, but blast his future prospects, even if it does not lead to a fatal termination of the case.

FRAGILITAS OSSIUM. A morbid brittleness of the bones, also called *Mollities ossium* (which see).

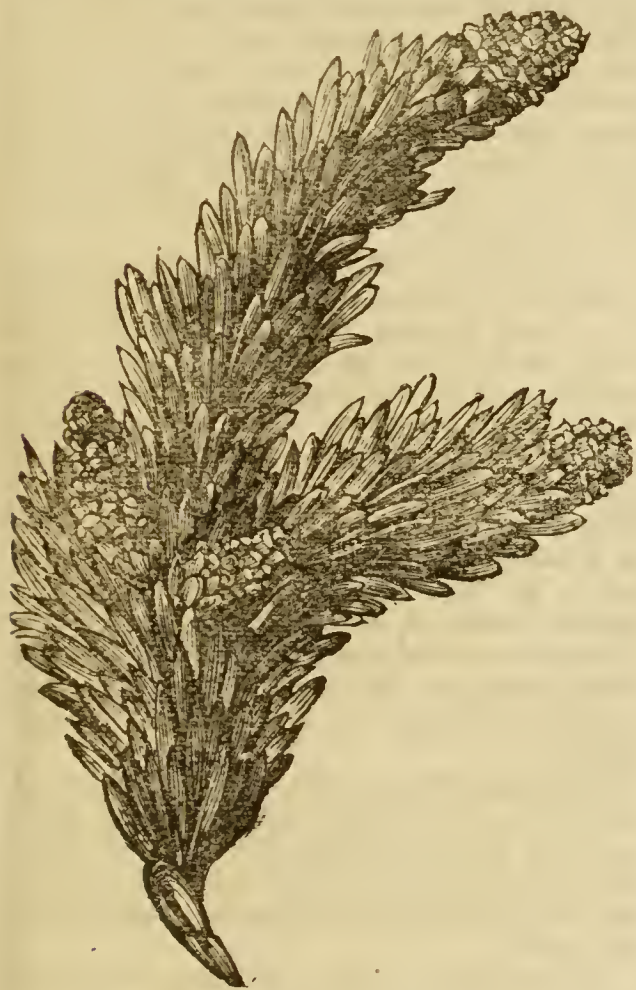
FRAGMENT. This term is applied in surgery to a splinter, or detached portion of a fractured bone.

FRAMBOESIA (French *framboise*, a raspberry). The name of a disease indigenous to Africa; it is identical with the *Great Gore*, *Pox*, or *Morbus Gallicus* of the fifteenth century, and is in Scotland termed *Sibbins*, a corruption of the Gaelic *Sivvens*, or wild rash. It consists of imperfectly suppurating tumours, which gradually increase, until they become as large as, and something like, a raspberry, the African name for which fruit is *Yaws*, by which term the disease is most commonly known, it will, therefore, be more fully described under that head.

FRANGIPANI. An extract of milk, made by evaporating skimmed milk to dryness; it is used for preparing artificial *Milk* (which see.)

FRANKINCENSE. The gum resin of the *Abietis Resina*, or Spruce Fir, formerly called

Juniperus Lycia; it was one of the gums used as incense in the worship of the true God, as well as of the false deities of idolatrous nations, and was thought to be obtainable only in Arabia, and in that part inhabited by the Sabæans, by whom the "incense trees" were jealously guarded, no persons being ever permitted to see them except those who had the care of them. We obtain the gum now from several species of the genus *Abies*, and call it variously *Burgundy Pitch*, *Frankincense*, *Thus* or *Thuris*, (all of which see); it is seldom or



ever used internally, but enters into the composition of several plaisters and ointments used as rubefacients and strengthening applications, such as the *Emplastum Thuris* of the Dublin, and the *E. Picis* of the London and Edinburgh Pharmacopœias.

FRAXINUS. Ash. The bark of the common Ash (*Fraxinus Excelsior*) has been used as a substitute for cinchona, in larger doses; the leaves also have been recommended as a substitute for senna, and employed in the treatment of rheumatic affections. They should be gathered in June, carefully dried, powdered, and put into a well-corked, or stoppered bottle; when required for use, infuse 1 drachm in a pint of boiling water

until cold, and strain; take a teacupful twice a day; as a purgative, $\frac{1}{2}$ an ounce of the Powder is required.

The *Fraxinus Ornus*, or flowering Ash, of which we give a cut, is the tree whose concrete juice, *Manna* (which see), is much used as a mild laxative for children.



Modern botanists call it *Ornus Europæa*, it belongs to the natural order *Oleineæ*, as does also the *Ornus Rotundifolia*, which also produces the manna, and is, like its congener, a native of the south of Europe,

FRECKLES. These are the little yellow or brownish spots—in scientific language termed *Lentigines*, which appear on fair skins, especially when subjected to the influence of the sun; those which have red hair, are more liable to them than any others; they disfigure the face somewhat, but cause no other annoyance. We know of no applications which will altogether remove them, although many venders of Cosmetics profess the art of doing so. To

mitigate their depth of colour, and to render them less noticeable, an acidulated wash of Water and Lemon Juice may be used; Mr. Erasmus Wilson, our greatest authority on skin diseases, recommends a linament composed of Lime Water, and Oil, with the addition of a little Ammonia. The most effectual remedy, however, that we know of is made as follows.—Solution of Chlorinated Soda, $\frac{1}{2}$ an ounce; pure Glycerine, 1 ounce; Rose or Elder-flower Water, $10\frac{1}{2}$ ounces; mix, and sponge the skin freely night and morning; if it makes the skin smart, reduce the strength with a little plain water. See *Cosmetics*.

FREEMAN'S BATHING SPIRITS. A popular remedy for rheumatism, sprains, &c.; it consists of common Soap linament, or Opodeldoc, coloured with some dark Tincture.

FREEZING POINT. The degree of temperature at which water changes to ice; this is 30° Fahr. See *Cold, Frigorific, Temperature, Thermometer*.

FRIAR'S BALSAM. This styptic application for wounds and cuts, and popular remedy for some internal complaints, is the Compound Tincture of Benzoin of the London Pharmacopœia; it may be prepared thus:—Gum Benzoin, $3\frac{1}{2}$ ounces; Strained Storax, $2\frac{1}{2}$ ounces; Balsam of Tolu, 10 drachms; Aloes, 5 drachms; Rectified Spirit, 2 pints; let it stand for fourteen days, shaking frequently, before using. This preparation is stimulant, expectorant, and antispasmodic, and is useful in old asthmatic cases, chronic catarrh, and phthisis with a languid circulation; the dose is about $\frac{1}{2}$ a drachm in Mucilage, or mixed with Yolk of Egg, or dropped upon Lump Sugar. Applied to wounds, it stimulates gently, and protects from the action of the air. It is probable that this, or something like it, was used by the monks of old to dress the wounds of wayfarers, or those who dwelt about the convents, hence its popular name.

FRICTION. (Latin, *frico*, to rub). The act of rubbing with the hand, or some interposing substance, is a very beneficial agency in the treatment of many diseases; it excites the nervous susceptibility of the skin, and quickens the circulation through the small capillary vessels, hence its utility in congestions near the surface, such as chilblains, and thickenings of the tissues. For some parts flesh brushes and rough towels may be used, the kind of friction spoken of by Thomas Hood, in his reminiscences of school days—

“Huckaback softened with sand;”

but this would not do for delicate skins, and parts that are tender, such as the breasts

of a suckling mother, which, when painfully distended with milk are often wonderfully relieved by gentle rubbing, the movements of the hand being facilitated by some oily or saponaceous fluid; simple Olive or Almond oil, is perhaps the best that can be used, the mechanical effect being the chief thing to be considered in the application of such *Linaments* (which see).

As a substitute for exercise, Friction may be strongly recommended; it should be applied often and vigorously, not only does it stimulate the parts brought immediately under its influence, and cause a healthful glow of the skin, but it calls into action the various sets of muscles, and so is in itself a kind of exercise for the whole system; hence it is better for the bather—who should always have Friction applied—to rub himself, and not be rubbed, especially in cold or temperate climates.

The value of Friction, in case of asphyxia or suspended animation, from drowning, &c., is so well known that we need scarcely insist on it here; in all cases where there is coldness of the extremities from congestion, or impeded circulation, it should be applied with promptitude and vigour. We have seen wonders performed by this simple agent alone; but for all that do not pin our faith to *kineopathy* (which see), nor believe altogether in “the Movement cure.” Good to a certain extent it undoubtedly is, but, like all other remedial agencies, it should be used with discretion; those who claim for it an universal efficacy do but injure its real utility.

FRIGIDARIUM. (Latin, *frigidus*, cold). A classical name for the cold bath, of a temperature not exceeding 65° Fahr.; above that, and up to 96°, it was called *Tepidarium*; and still rising to 100° and more, *Calidarium*. See *Bath*.

FRIGORIFIC. (Latin, *frigus*.) The property of producing extreme coldness, so as to convert liquids into ice; a combination of certain chemicals will have this effect, which is a consequence of the rapid absorption of heat by bodies passing from the solid to the fluid state. In cases which require the application of cold to an inflamed surface, Frigorific mixtures are of great utility; the following are among those of which the ingredients are most accessible: 1st., Snow or Pounded Ice 2 parts, Common Salt 1 part; 2nd., Snow 3 parts, Dilute Sulphuric Acid 2 parts; 3rd., Muriate of Lime 5 parts, Snow 4 parts; 4th., Muriate of Ammonia, and Nitrate of Potash, of each 5 parts, Water 16 parts; 5th., the above with 8 parts of Sulphate of Soda; 6th., Sulphate of Soda 5 parts, Dilute

Sulphuric Acid 4 parts. The salts in all the above recipes should be finely pounded and kept dry, until the liquid is added; if this is plain water, it should be drawn fresh from the well, or taken from some cool place. Rags wet with the lotion should be kept applied to the inflamed part, and renewed as often as they cease to impart a sensation of coldness. See *Lotions. Refrigerants*.

FRÆNUM (Latin, for a bridle). Hence we have *F. præputii*, a triangular fold connecting the prepuce with the under part of the *Glans Penis* (which see); *F. linguæ*, a fold formed at the under surface of the tongue by the mucous membrane, lining the mouth. When the frænum is very short, or continued too far forward, children are what is called *Tongue-tied* (which see); *F. epiglottidis*, a ligament which unites the epiglottis to the *Os hyoides* and the *Tongue* (which see); there is also a fold of the mucous membrane of the mouth formed opposite the symphysis of the *Chin*, (which see).

FRONS. (Latin *frontis*, the forehead.) Hence we have the terms *Frontal*, applied to the arteries, nerves, sinuses, &c., of the forehead; also to a spine or sharp ridge, and to a groove or furrow in the inner surface of the frontal bone, which by surgeons is termed the *Os frontis*. See *Head. Skull*.

FRONTAL SINUS. This is the cavity in the bone behind the eye-brow, extending to the nose; any inflammation in the mucous membrane of which is likely to extend upward into this hollow. Hence in colds, especially those which assume a catarrhal character, we often have severe pain over the eyes. See *Sinus*.

FRUIT. This is the edible seed of many kinds of plants, being in fact the pistil of the flower arrived at maturity; it may be hard as in the Nut, or soft as in the Cherry or Grape; its flavour depends upon the existence of certain secretions from the sap of the plant, but more especially of acid and sugar—the process of ripening being the conversion of much of the other ingredients of the juice into the saccharine principle. Although allusion is made in this volume to all the fruits generally eaten under their special heads, yet it will be as well to make here a few general remarks, and first as to the question of the wholesomeness or otherwise of fruits with which we are more immediately interested; there can be no doubt that, both in their fresh and dried state they are extremely useful, affording to the blood the saline constituents which it generally needs, cooling the system, and in many

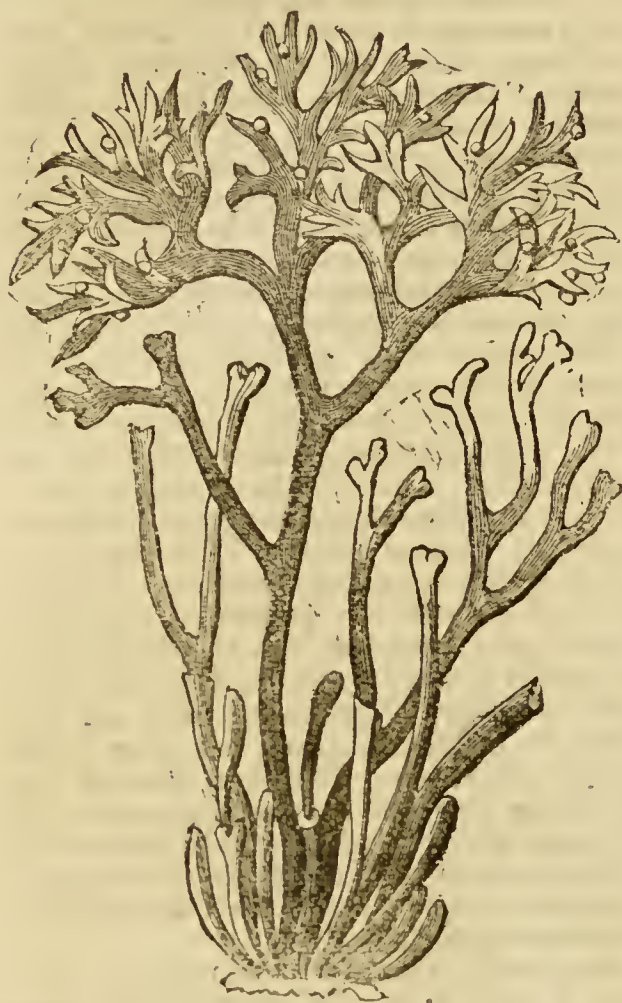
cases acting as a gentle aperient; the best, because the most easily digested kinds, are those which are soft and pulpy, having the seeds enclosed in a pouch, skin, or rind, such as Grapes, Currants, Gooseberries, Strawberries, Raspberries, Blackberries, Mulberries, among native, and Oranges and Lemons among imported fruits; Apples also, although not soft and pulpy, are very wholesome; but as much cannot be said for Pears and Medlars, as, in most kinds of these, decomposition commences directly the ripening process is completed, so that they are seldom eaten in a perfectly sound state. Stone Fruits, such as Cherries, Plums, Apricots, &c. are not so wholesome as those with seeds, although taken in moderation they act beneficially, especially in a cooked state. Melons and Pine Apples we must pronounce decidedly unwholesome. With regard to the best time for eating Fruit, let us observe that it is digestible in proportion to its perfection, and, therefore, care should be taken to have it perfectly ripe, and yet not in a state of decay. Most juicy Fruits are best taken in hot weather, and the drier kinds in the cold seasons. The best time of day for eating Fruits is the morning, none but the more watery kinds should be eaten after midday, and none at all late in the evening. The worst possible time to eat them is just before going to bed.

FRUMENTY (Latin, *Frumentum*). We give a receipt for the preparation of this article of diet, although we cannot recommend it as wholesome, especially if made, as it generally is, of new grain:—Boil a quarter of a pint of Wheat in water for three or four hours, then drain off the liquid, and add a quart of Milk, with which has been previously mixed 2 tablespoonsful of flour, 2 Eggs, a $\frac{1}{4}$ of a pound of Currants, a little Lemon Peel, and Spice of some kind, Cinnamon is perhaps the best; boil for about twenty minutes and sweeten; no doubt this is very nourishing, but it is heavy and difficult of digestion; if taken at all it should be as a very occasional luxury. The name of the above is commonly corrupted to *Frumity* or *Fermity*.

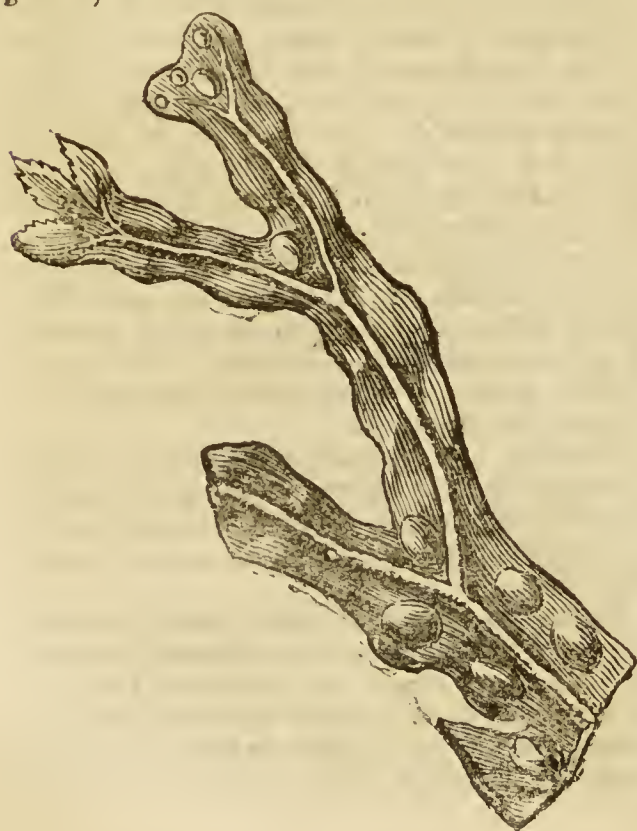
FRYING. Is a mode of cooking which, those who have a regard for the preservation of health will avoid as much as possible; it is altogether unsuited for persons of weak digestion.

FUCUS. A genus of marine plants, several species of which are used medicinally; of one of them, the *Fucus* or *Chondrus Crispus*, we have given an account under the head of Carrageen Moss; another is the *F. Vesiculosus*, or Bladder Sea-wrack, which was

formerly given in goitre and other scrofulous affections; it was prepared in the same



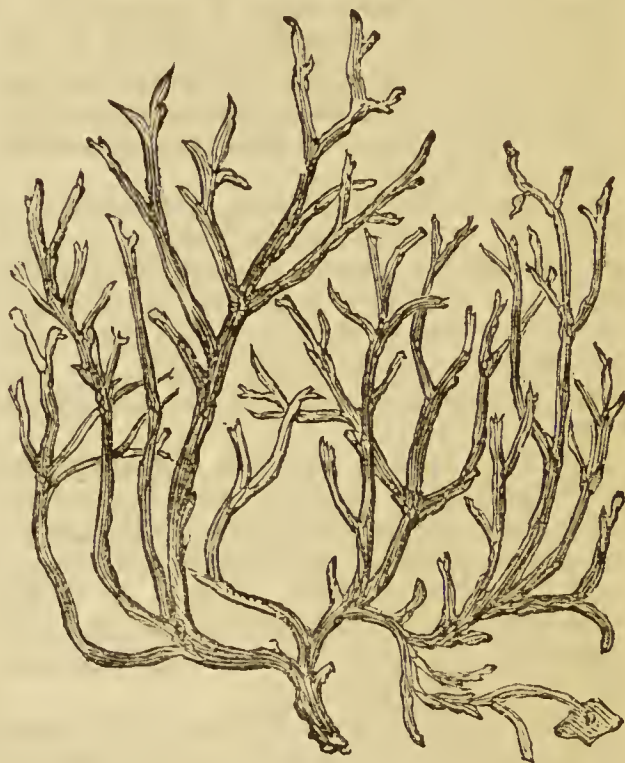
way as Burnt Sponge: dose from 5 to 10 grains, sometimes increased to a drachm.



Since the preparation of Iodine from this and other sea weeds, the above inconvenient mode of administration has fallen into disuse; but the fresh *Fucus*, bruised, is still occasionally applied to scrofulous tumours, and to those living on the sea coast who can readily obtain it, its use may be recommended. We give a cut of this species.

The Bladder-Wrack was first described by Clusius, under the name of *Quercus Marina*—Sea Oak—the black powder which it formed on being burnt—in which form it was generally administered—was generally known as the *Vegetable Æthiops*.

There is also another *Fucus*, the *F. Gigartona*, or *Helminthocortus*, commonly



termed Corsican Moss, which has been given to expel worms, especially the limbrici, it has likewise been thought useful in cancer; dose of the Powder from 20 to 60 grains; of the Decoction from 1 to 2 ounces; of the Infusion a winglassful; of the Gelatine a drachm.

FULIGINOUS (Latin *fuligo*, soot or smoke). Applied to vapours which possess the properties of smoke. Wood Soot, the *Fuligo ligni* of old medical works, was once a favourite remedy for hysterical affections, chronic rheumatism, and catarrh of the bladder; outwardly, it was applied for the cure of itch and various skin diseases, as well as for cancer. When used for chronic eruptions, the crusts are first removed by means of poultices. It is also sometimes applied to burns; but is too irritating for

this purpose. Wood Soot is still a favourite remedy with some continental practitioners; the more shining particles are selected for use. *Fuligo Kali* is a preparation of Wood Soot with Sulphur and Potash; it is sometimes given as an alterative in herpetic eruptions, and in scrofulous and rheumatic affections; the dose is from $1\frac{1}{2}$ to 2 grains three times a day. See *Anthrakokali*.

FULMINATING (Latin *fulmino*, to thunder). A term applied to detonating or explosive mixtures, of which the most common example is the Fulminating Powder, a compound of 3 parts of Nitre, 2 of Carbonate of Potash, and 1 of Sulphur. *Fulminic Acid* is a compound of Cyanogen, which, like the above powder, explodes when struck, rubbed, or heated, the explosion which then ensues being called *Fulmination*. We are not aware that any of these preparations are employed medicinally, although they sometimes make surgical cases, being the explosive agents employed in "infernal machines" and the like destructive engines.

FUMIGATION (Latin *fumigo*, to perfume). This is a mode of diffusing vapours over a limited space, for the purpose of destroying or hiding disagreeable and unwholesome smells; or of applying them to a diseased part, such as the inside of the throat, which it would be difficult to reach in any other way. The most useful and important kind of Fumigation consists in the employment of such gases or vapours, which do not merely cover unhealthy odours, by exciting others more powerful, but which actually destroy them, and by their chemical action prevent the decomposition of animal and vegetable substances; these we term *Disinfectants*, and Chlorine Gas is, perhaps, the most efficacious that can be used; it may be produced thus:—Take powdered Oxide of Manganese and Common Salt of each 1 ounce, mix with about 2 teaspoonsful of Water, put it into a shallow earthen vessel, and add about 60 drops of Oil of Vitriol; place the vessel in the apartment to be fumigated. The acid may be repeated three times before the Manganese and Salt lose their power of evolving Chlorine. Chloride of Lime, of Soda, and of Zinc are also good disinfectants, and are much used in hospital wards, sick rooms, water-closets, &c. The first of these is the cheapest and the most attainable; it may be used in solution, 1 part of the salt, which is commonly called "Bleaching Powder," being dissolved in 100 parts of Water; it may be sprinkled about the place, or poured into shallow vessels; its action will be quickened by the addition of a little Vinegar, or Mu-

riatic Acid largely diluted. (See *Disinfectants*, *Lime*, *Manganese*, *Soda*, *Sulphur*.) The vapour of burning Sulphur, of Vinegar, and aromatic substances, such as Cascarilla, have long been employed to hide unpleasant effluvia (see *Pastilles*). The following is a good preparation for this purpose:—Take of Bisulphate and Nitrate of Potash equal quantities, Peroxide of Manganese sufficient to blacken the mixture; rub them together in a mortar; heat a shovel or brick red hot, and scatter some of the powder on it; then burn a small piece of paper which has been dipped into a solution of Nitrate of Potash 2 parts, Sugar 1 part, and Water 6 parts, and afterwards dried. The two vapours will combine, and diffuse a most agreeable odour.

With regard to the application of the vapour or fumes of metallic or other preparations to the throat, or other parts, we can only say here that the mode of doing this is to throw the ingredients upon hot iron in a closed chamber, connected with which is a spout like that of a coffee-pot, through which the vapour is conducted to the point of application: under the head of *Inhalation* more will be said upon this subject.

FUMING LIQUORS are those chemical mixtures which emit fumes of vapour when exposed to the air. Several of the strong acids do this, and the volatile preparations of Ammonia, &c. The Hydrosulphuret of Ammonia was formerly known as *Boyle's* or *Beguin's Fuming Liquor*. The Chloride of Arsenic, which inflames when brought into contact with the air, was termed *Cadet's F. L.*; and the Bichloride of Tin, *Libavious' F. L.*

FUMITORY. A creeping plant, with a purplish blossom, that overspreads the English cornfields and waste places during the summer and autumn months; it is the *Fumaria Officinalis* of botanists, belonging to the natural order *Fumariaceæ*, and, although now little used, was once thought a valuable therapeutic agent, having been employed in jaundice, diseases of the eye, scorbutic complaints, and chronic affections of the skin. Cullen found it serviceable in lepra, as well as in the more tractable cutaneous diseases. Dose, of the Powder, from 10 to 40 grains; Extract, 5 to 20 grains; of the Tincture, 1 to 2 drams; Juice, 2 ounces. (See cut next page.)

FUNCTIONS (Latin, *functor*, to discharge an office). These are the offices or duties of the various organs of the animal economy. They may be divided into—1st, *Vital*, such as are immediately necessary to life, as are



those of the brain, the heart, and the lungs, which have been collectively called the tripod of existence; 2d, *Natural*, those which are less instantly necessary to life, as absorption, assimilation, digestion, expulsion, &c.; 3d, *Animal*, as those which have relation to the external world, as the senses and the voluntary motions. *Reflex Function* is a term applied by Dr. Marshall Hall to that action of the muscles which arises from a stimulus, applied through the medium of the nerves and the spinal marrow; thus, the *larynx* closes on the contact of carbonic acid, the *pharynx* on that of food, and the *sphincter ani* on that of the faeces. All these three are Reflex Functions, or Involuntary Motions connected with *Irritability* (which see). By *Functional Disorder* we mean that condition of an organ in which its natural duties are suspended without any absolute structural alteration.

FUNGI. A tribe of plants, in which are included the various kinds of mushrooms, toad-stools, and similar productions, as well as the more minute growths, known as brand, dry-rot, mildew, mouldiness, rust,

smut, &c. They are mostly indicative of an influence prejudicial to health, if not to life, and a large proportion of them are absolutely poisonous; they flourish chiefly in damp, close situations, and, instead of purifying the air, like other plants, by absorbing its carbonic acid, and giving out oxygen, they vitiate it by a precisely opposite process. Of the various plants of this kind which grow wild in our own country, it is not always easy to distinguish between the poisonous and wholesome ones, and only those who are accustomed to observe them closely are likely to avoid mistakes which may be fatal.

Dr. Badham, in his work on the "Esculent Fungi of England," says, those which are bitter, or styptic, or that burn the mouth on mastication, or parch the throat when they have been swallowed, should be put aside. He adds, that those which yield spiced milk, of whatever colour, should be held, notwithstanding exceptions, in suspicion, as an unsafe dietary to deal with. He remarks, too, on the fallacy prevalent among cooks that *only* the poisonous fungi will tarnish a silver spoon used in the dressing. The following simple rules to distinguish poisonous from wholesome fungi may be of service—1. Notice that the deleterious kinds have generally a rough warty cap, with fragments of membrane adhering to the upper surface; that they are thick and heavy in form, and emerge from a vulva or bag; they grow generally in tufts and clusters, about the roots or on the boles of decaying trees, and other places where vegetable decomposition has taken place; 2. That they have an astringent taste, and a disagreeable smell; 3. They are moist on the surface, and often of a rose or orange colour, turning blue when cut; 4. If salt be sprinkled on the gills, or spongy part, it will become yellow; if the Fungus be wholesome a change to black will be the result of this experiment. The kinds to be eaten are mostly found in open fields and in waste lands; they have commonly a smooth upper surface, a compact form, and white flesh of a brittle texture; the footstalk is clean, smooth, and cylindrical, and is of considerable length. (For further particulars on this head, see *Mushrooms*, *Toadstools*.)

The Fungi of this country might be turned to much better account than they are as an article of diet if the poor could be instructed how to distinguish the wholesome from the poisonous kinds. On the continent they are very much eaten, and deservedly esteemed; both in flavour and texture they more closely resemble meat than any other

vegetable production, and they are certainly nutritious. The Russians eat most kinds, stewing them thoroughly, and taking after them a little brandy. Among those chiefly used may be named the *Morells*, which are imported dry from Italy, and generally made into a sauce. *Truffles* are also an imported species, which are made into soups and delicate sauces. *Puff Balls* are slightly narcotic; the dust of them is said to stupify bees. *Boletus Suaveolens* is employed medicinally in phthisis—dose, 1 scruple, in Powder, three or four times a day in an Electuary. *Agaric* of the *Tartary Larch*, sometimes called Male Agaric, has been given as a purge—the dose is from 1 to 2 drachms in Powder, mixed with Ginger; it comes from Turkey to this country. *Champignon*, or *Scotch Bonnets*, is used to flavour sauces. *Jew's Ear*, which grows on the elder, was once esteemed as a remedy for Quinsy, soaked in milk or vinegar. *Oak Leather* is a Fungus found in the clefts of oaks; it is used in Ireland to dress ulcers, and in Virginia to spread plaisters on—so tough and leathery is it. *Touchwood*, or *German Tinder*, when softened by beating, is used as a styptic for fresh wounds and cuts, or as tinder, when soaked in a solution of Saltpetre, and dried.

In poisoning by Fungi, the best remedy, after free vomiting has been induced, and clysters employed, is 1 drachm of Ether, and 10 drops of Tincture of Capsicum, in a wineglassful of Water.

FUNGIC ACID. Is found in most members of the Fungus tribe; it exists partly in a free state in the *Periza nigra*, and combined with potash in the *Boletus juglandis*. It is colourless, very sour, uncrystallizable, and deliquescent.

FUNGIN. Is the fleshy substance of edible mushrooms, purified by digestion in a hot weak solution of Alkali; it is highly nutritious, and in many of its properties closely resembles *Liquin* (which see). Then we have also *Fungates*, the salts of the acid spoken of above; and we say that certain growths or formations are *Fungiform*—that is, Fungus-like; the term is usually applied to the papillæ, near the edge of the tongue.

FUNGOID. In surgery signifies a growth, which may be either *simple* or *malignant*; the former is merely an extravagant granulation; when it occurs in wounds we term it *Proud Flesh* (which see); the latter is termed *Fungus hæmatodes* (Bleeding Fungus); it is also known as Soft Cancer, Spongoid Inflammation, and Medullary Sarcoma. In England it is a form of

Encephalosis; in France, of *Nævus*, or morbid Erectile Tissue.

FUNIS UMBILICUS. The umbilical or naval cord; that which connects the fœtus in the womb with the placenta; its length is little short of two feet. See *Umbilicus*.

FUNNELS for medical purposes should always be made of Glass or Wedgewood-ware; in the latter case, glazed and fluted in the inside. They may be of any required size, from 2 ounces to a pint or more. The most convenient shape is that represented at page 267, under the head of *Filtration*.

FUR. As an article of dress, is one of the most efficient protectors against cold which can be worn, yet much mischief often results from the uncertain and injudicious use of it. As an extra covering in cold weather, to be laid aside indoors, it may be safely recommended; but females who wear boas, and victorines round the neck, are apt, when the friction of the Fur has produced excited action, and its natural result, perspiration on the part covered, to remove the protection without sufficient care as to the state of the atmosphere, and cold, and sore throat is often the result. It is better not to use Fur at all, than to do so fitfully and without due caution. Persons with delicate lungs find great advantage from having it constantly on the chest, next the skin, for not only is it a protection against cold, but its action is that of a mild counter-irritant. Nothing is better for this purpose than the prepared bear and rabbit skins which may be obtained of any hatter or hosier.

FURFURACEOUS (Latin *furfur*, bran). A term applied to a deposit in the urine which has a branny appearance; it consists chiefly of the phosphates. (See *Urine*). A desquamation of the cuticle is also called *furfur*. See *Skin*.

FUROR UTERINUS. Latin for Uterine Madness. See *Nymphomania*.

FURUNCULUS (Latin, *furo*, to rage). An angry boil, so called from its violent inflammation. *Dothein* was the term applied to it by Paracelsus; we generally speak of it as a *Carbuncle* (which see).

FUSIBILITY (Latin *fusus*, melted or poured out). The property of assuming the fluid state. Thus some of the urinary concretions are called *Fusible Calculi*. They consist of the Phosphates of Ammonia, Lime, and Magnesia. (See *Calculi*.) Again we have *Fusible Metal*, an alloy of Bismuth, Lead, and Tin, which melts at a lower temperature than that of boiling water.

FUSION. By this term we understand the act or state of melting. Those substances

which admit of being *fused*, are termed *fusible*, and those which do not, *refractory*. The term *Fusion* is chiefly applied to metals and other substances which melt only at a high temperature ; it must therefore not be confounded with *Liquefaction*. By *Igneous Fusion* we understand the melting of certain salts by heat, without undergoing decomposition, and by *Aqueous Fusion* the solution of salts, which contain water of crystallization, on exposure to increased temperature.

GALACTEA (Greek, *gala*, milk). This term is applied either to a morbid flow, or a deficiency of the lacteal fluid ; the former has been called *Galactorrhœa*, or milk flux, and we sometimes hear both of these affections called *Mislactation*. See *Milk*, *Suckling*, &c.

GALACTIC ACID, sometimes called *Lactic Acid*. The acid of milk, now believed to be only animalized acetic acid.

GALACTO-PHORUS. (Greek, *gala*, milk, and *phoro*, to carry). A term applied to the ducts of the mammary glands through which the milk is conveyed. See *Breast*.

GALACINE. Is a substance procured from the bark of *Guaiacum* (which see) ; it dissolves in nitric acid, and forms, in this way, oxalic acid.

GALANGA or **GALANGALE**. A species of *Maranta*, as it is generally supposed, although considerable doubt yet exists ; several plants having been introduced and sold under that name. The *Galanga Major*, or *Alpinia Galanga*, which appears to be the true

has a very peculiar odour and a bitter, acrid, and disagreeable taste. Its medical properties are antispasmodic, expectorant, and deobstruent, partaking very much of the nature of *assafœtida*, than which, however, it is less energetic. It is more frequently employed externally as a stimulant and antispasmodic, than internally ; the following are its chief official preparations :—Compound Pills of Galbanum, of Assafœtida, and of Myrrh, the dose of either being from 10 grains to 30 ; Tincture of Galbanum 1 drachm ; Plaisters of Galbanum, Simple and Compound, of Assafœtida, and Gum Plaister.

GALEN'S BANDAGE. A name sometimes applied to the four-tailed bandage, or single split cloth. See *Bandages*.

GALUM APERINA and **VERUM**. These are the botanical names of two plants belonging to the natural order *Rubiaceæ*, which are sometimes used medicinally ; the first is commonly known as *Cleavers*, or *Goose Grass* ; it has aperient, diuretic, and anti-



Galangale, is a native of China, and the Malayan Archipelago, has fragrant aromatic roots, highly astringent ; it is sometimes used in dyspepsia, and as a masticatory in paralysis of the tongue.

GALBANUM. This is the concrete resinous juice of an evergreen plant, growing in Africa and the East Indies, about the species of which there is much uncertainty. The gum



scorbutic properties, and was formerly much used in the treatment of dropsy, scrofula, and congestion of the spleen. The fresh herb made into an ointment with Lard, is a good application for glandulous and serofulous swellings, and cancerous and foul ulcers. Recently the internal use of this plant has been revived as a remedy for lepra and other cutaneous diseases ; it is made into a kind

of diet-drink thus:—a large handful of the herb boiled in 2 pints of water for about half an hour; strain, and take $\frac{1}{2}$ a pint three times a day.

The Yellow Ladies Bed Straw, as the *G. Verum* is commonly called, is a popular remedy for hysterical complaints and epilepsy, and has been prescribed in affections of the brain, in the form of an Infusion, made by pouring $1\frac{1}{2}$ pints of boiling water

preparation is from 1 to 2 drachms. Gargles, Lotions, &c., are made of the Infusion, or Decoction, the proportions being about 2 drachms of the Powdered Galls to a pint of water; a drachm of this powder with a scruple of Sulphate of Copper, and 1 ounce of Lard, makes a good ointment for ring-worms.



on 2 drachms of the herb; dose, a wineglassful taken warm, several times a day. In the form of ointment it is applied to scrofulous sores.

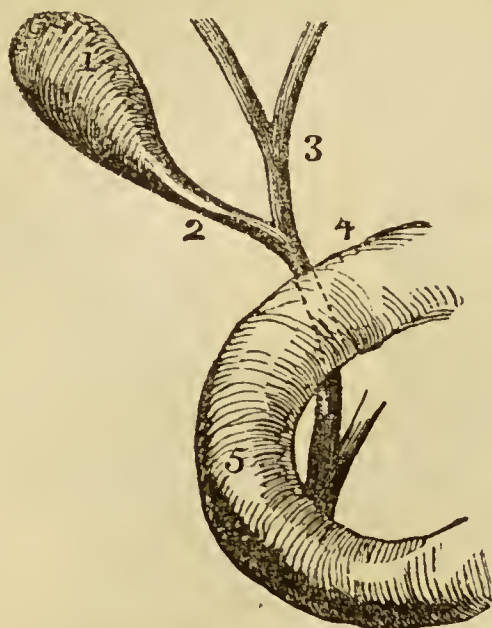
GALLS. These are excrescences found on the Dyer's Oak, *Quercus Infectoria*, natural order, *Corylaceæ*, and some other species of the genus *Quercus*; they are the result of a morbid action excited in the leaf-buds by an insect, *Cynips Quercus*, depositing its eggs there; the buds, instead of elongating, and becoming branches, enlarge into a globular figure, so as to constitute a fit nidus, or nest, for the forthcoming maggots. The Galls possess peculiar astringent properties in consequence of the large quantity of *tannin* which they contain; they are chiefly used in gargles, lotions, injections, and ointments; the latter being a very effectual application for piles. The Tincture of Galls in Mucilage, is sometimes given with good effect in cases of diarrhoea; the dose of this



Gallic and *Tannic* acids, already spoken of under the head of *Acids*, are both obtained from galls which owe their astringent properties to them; they are a good deal employed to correct internal hæmorrhages and other discharges; the dose of either is from 2 to 12 grains as an astringent; as a general tonic and peptic, from 2 to 3 grains; rickety children may take from half to a whole grain; as much as 20 grains three times a day has been given in chylous urine.

GALL-BLADDER. The receptacle for the *Bile* (which see). It is situated on the concave side of the liver, and lies upon the colon, part of which it tinges with its own yellow colour; it is about the size of a small hen's egg, and the shape of a pear, as shown in the annexed diagram. No. 1 being the bladder itself; 2, a duct proceeding from its under extremity, and running into another from the liver, (3); the two together form what is called the bile duct (4), which enters the descending portion of the duodenum at

5. This bladder must be sought for beneath the right lobe of the liver, at about the boundary line between the epigastric, and



right hypochondriac region. (See *Abdomen*.) The bile secreted by the liver is here collected, retained for a certain time, until rendered more fit for its office by admixture with the peculiar produce of the bladder, and then expelled. "The gall bile and bilious system," says an eminent authority, "are to be regarded as the results of the secretions of the nitrogen of the air by the skin. The oxygen is fixed and secreted by the lungs; the one sustaining the arterial circulation, and the other the venous. Their action and reaction is healthy animal life, any disturbance is disease, and the arrestation of either is death."

We should mention that the Gall-bladder is composed of four membranes, or coats—the common, the vascular, the muscular, and the nervous; which last has a wrinkled surface within, and is furnished with an unctuous liquid.

GALL SICKNESS. The Wahleren fever, which proved so fatal to the English in 1809, and one of whose permanent symptoms was vomiting of bile, was popularly so called. See *Bile, Fevers*.

GALL STONES are calculous concretions, sometimes formed in the bladder, from the peculiar crystalline ingredient of the bile termed *Chloresterine*; they vary greatly in size, some being smaller than a pea, and some as large as a walnut; they often remain in the bladder without causing any uneasiness; but, when one of any considerable size passes into the duct, it gives rise to violent spasmodic pains, which cease only when the stone has effected its passage into

the bowels. The Gall duct is, in calibre, no larger than an ordinary goose quill, and therefore this operation is often a difficult and protracted one; its symptoms are agonizing pain in the region of the bladder, often accompanied by shivering and vomiting; when the obstruction has passed into the common duct, and so stopped the flow of bile from the liver, there will be *Jaundice* (which see), with white and chalky evacuations. When there are these symptoms, with absence of pain on pressure, and no fever, we may safely conclude that inflammation is not the exciting cause, but Gall Stones; their presence in the fæces may be easily detected, as they float upon water. The proper treatment in an attack of this kind is hot applications over the seat of pain, or a warm bath. A draught should at once be given of Laudanum, a full dose of 30 drops, following it up with 20 drops every half-hour or so, until the severe pain is relieved; if the patient retches much, and liquids cannot be retained, pills of solid Opium, 1 grain each, had better be administered. There is commonly great acidity of the stomach while gall stones are passing; hence an alkaline draught is of service, say half a teaspoonful of Carbonate of Soda in a good quantity of warm water; the Laudanum may be added to this. Should the stomach reject these remedies, the anodyne must be administered in a Clyster, of about 40 drops of Laudanum in a pint of thin Gruel. Hot Bran Poultices, sprinkled with Laudanum, may be applied to the seat of pain.

The following is a good solvent mixture where Gall-Stones are known to be present:—Castile Soap, 2 drachms, melt by heat in $\frac{1}{2}$ a pint of water; add Spirits of Turpentine and Ether of each 2 drachms; take a table-spoonful three times a-day.

GALVANISM. A form of electricity, so named from its discoverer Galvani; it is usually elicited by the mutual action of various metals and chemical agents upon each other, Copper and Zinc and Sulphuric Acid being those most commonly employed. It is sometimes called *Voltaism*, on account of the additional discoveries made by Volta, and sometimes *Animal Magnetism*, from its effects on the muscles of animals newly killed. Under the head of Electricity, we gave a description, with a cut of an Electrical Machine; we will now describe a Galvanic Battery, that our readers may understand the difference in the two methods of exciting and liberating the subtle fluid. The most simple apparatus of this kind that can be used is a set of tumblers, any even

number will do, according to the strength required; about half fill them with water slightly acidulated with Sulphuric or Nitric Acid, and place them close together in a row; put into the tumbler at one end a broadish strip of zinc, and into that at the other a similar strip of copper, and in each of the intermediate ones a strip of both metals with their flat sides together. Connect the whole by means of a bent wire passing along the top, through this the galvanic current will pass, and also through the body of any person who places one hand on the outer zinc and the other on the outer copper strip, these being the positive and negative poles of the battery.

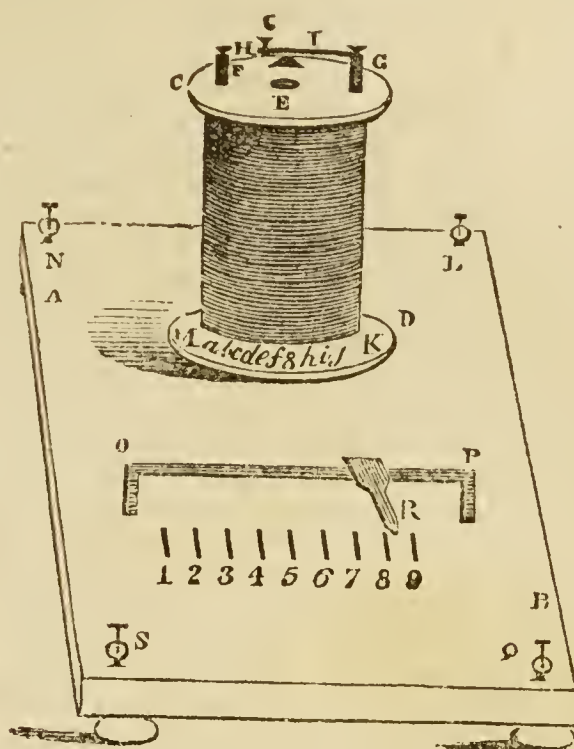
The *Galvanic Pile* may be made in this way: Take 20 or 30 pieces of zinc, each as large as a penny, as many pieces of copper of the same size, and as many of cloth or paper, which last are to be dipped in a solution of salt and water; then build the pile by placing the pieces in this order—zinc, paper, copper; let it stand on a piece of board, and be kept in its position by rods of glass, or varnished wood. Then, if the hands are wet, and one placed at the bottom of the pile, and the other at the top, a slight shock will be felt; and this will be the case every time one hand is withdrawn from the pile, or placed on it—thus breaking or establishing the electric current passing through the system.

The *Galvanic Trough*, a very powerful apparatus, is composed of zinc and copper plates placed in pairs, so that the zinc is always presented towards one end, and the copper towards the other. When the trough is nearly filled with water impregnated with Nitric or Muriatic acid, and the points of the wires which connect the two end plates are brought together, the action is very powerful; sufficiently so, when the plates are large and numerous, to decompose water, fuse metal, and work other chemical changes which can only be effected by intense heat.

Galvanic action is now applied to a great variety of useful purposes connected with art and science; it differs from that of Electricity, as formerly applied, in being continuous, the fluid being renewed as fast as it is used; and therefore it never exhausts itself whilst the materials remain which produce it. The patient to whom it is applied is only sensible of its application at the commencement and finish thereof, and not then unless the current is very strong. Perhaps the most cheap and effectual apparatus which one, requiring its application, can have is the *Galvanic Coil*, of which we

give a cut, with directions for its construction.

AB is a rectangular piece of board, upon which is fixed vertically a hollow cylinder of wood, CD, wider at the bottom, like a



reel, but not quite so wide at the top. Inside this cylinder is dropped a piece of bar iron, E, which rises slightly above its surface. On one side is a brass upright, F, from which proceeds a piece of watch-spring, H, having at its end a small cone of iron which nearly touches the bar, E. On the opposite side is an upright of brass, G, from which proceeds a flat piece of brass, I, through which passes a brass screw, J, having at its extremity a small piece of platinum, which comes in contact with another small piece of platinum fixed on the watch-spring, H. Round the wooden cylinder, CD, is wound some covered copper wire (No. 12 or 14) nine times (more or less as the number of powers required) at right angles to its axis, so as to constitute nine helices, which are connected, and together form one helix continued within itself. The interior is the first, the exterior the last helix. The winding of the wire should proceed from the top of the cylinder, leaving a piece about one foot in length, which, passing down laterally between the interior of the first helix and the wooden cylinder, and emerging at bottom, is pushed through a hole at K, passed under the board, and connected with the bottom of a binding screw, L. The last coil of the first helix is then laid bare, by removing the covering away a little at each side; and to this is fixed a

piece of uncovered copper wire, which is pushed through a hole at A, and connected under the board with an upright piece of brass wire, 1. The top of the second helix is next laid bare, and connected in a similar manner with the upright piece of brass, or power 2, by a piece of copper wire passing downward between its interior and the exterior of the first helix, and through a hole at *b*. And so from top and bottom alternately, are the remaining helices connected with the other powers; thus, the bottom of the third helix through the hole at *c*, with the 3rd power; the top of the fourth, &c.; until the top of the eighth is connected with the 8th power. Then the exterior end of the continued helix, which is the bottom coil of the 9th helix, is passed through a hole at *i*, and connected with the bottom of power 9; which power is also connected with a wire passed upwards through a hole at *j*, then along the outside of the helix and through the top of the cylinder, with the bottom of the upright G. The binding screw N is similarly connected, through a hole at M, with the upright F. The wire which passes under the board from N to M, is joined in the middle to another piece of wire connected with the bottom of the binding screw S. Between the cylinder and the powers is fixed a piece of brass wire, OP, bent twice at right angles, the bottom of which is connected with the binding screw Q. This brass wire has a moveable piece of brass, R, which may glide along it, and rest on either of the powers required. The coil should be covered with leather, the bottom of the board with baize. Care should be taken that there be no metallic contact anywhere, except in the parts mentioned. The coil is then complete; its expense is 16s. L and N are screws for battery, S and Q for patients. In galvanizing invalids it is a matter of primary importance that the cross current should have the same direction as the nervous fluid. It is a forgetfulness of this which renders futile the attempts of many galvanists. Again, the instruments sold by philosophical instrument makers have generally two continued helices; in one of which the voltaic circuit is completed, in the other a current is induced, which is utterly useless as a remedial agent.

Medical Galvanism. Has of late come much into use; the following remarks, by one who fully understands both the theory and practice of it, will show how it should be applied, and the special diseases to which it is most applicable:—"There are some diseases in which the existing electricity in the body should be *increased*, to bring

about a cure; and, on the other hand, others which require it to be *decreased*. It is, therefore, requisite for the Medical Galvanist to ascertain, by the nature of his patient's complaint, whether the electric fluid already circulating in the nerves is too plentiful, or insufficient: if the former, he must decrease it; but if the latter, increase it. Now, to increase the electric fluid in the system, we must apply the positive pole, or electrode, as it is sometimes called, to the hands, feet, or part affected, and the negative to the spine, or back of the neck. To decrease it, we must reverse this arrangement, and place the positive pole on the back, and the negative on the hands, feet, or part affected. We now give a list of those diseases requiring to be increased, and those for decrease of electricity:—

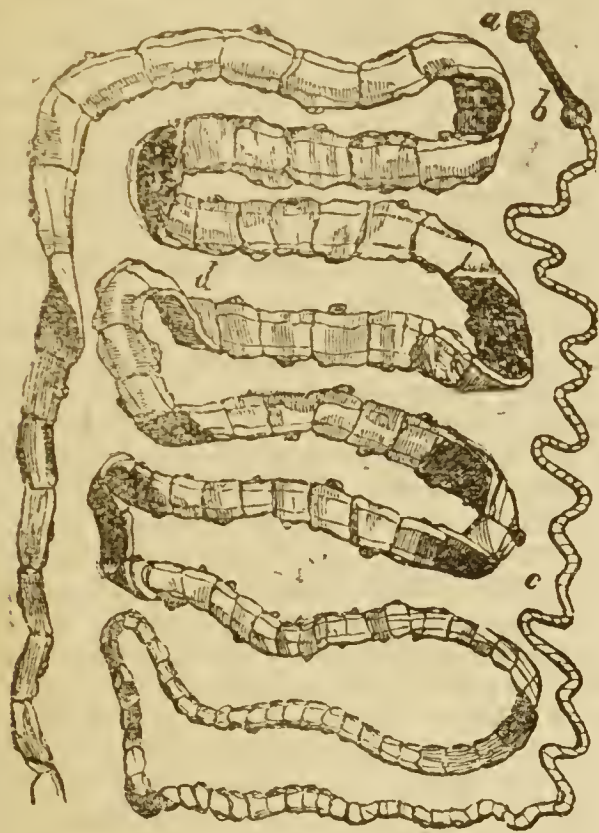
<i>Increase.</i>	<i>Decrease.</i>
Amenorrhœa.	Cramp.
Asphyxia.	Epilepsy.
Deafness.	Headache.
General Debility.	Neuralgia.
Hysteria.	Profuse and Painful Menstruation.
Indigestion.	Rheumatism.
Paralysis.	Tic Doleureux."

The principal effect of *Electro-Galvanism*, as it is sometimes termed, appears to be that of a powerful stimulant to the nervous and muscular systems; but, besides this action, it appears to have the power of allaying pain and irritability in the part to which it is applied; the reason of this is by no means apparent, and the use of the agent must therefore, for the present, be to a certain extent empirical, even by such eminent scientific men as Doctors Jones and Wilson, who have recently been employing it with marked effect in *Tetanus* (which see).

A very convenient, because portable instrument, in relation to our present subject, deserves mention here; it is Springfellow's Electro-Galvanic Pocket Battery, which is small enough to be carried in the waistcoat pocket. The Electric Chain, or Belt, of Pulvermacher is also a recent mode of application of Electro-Galvanism to curative purposes, and worthy of comment. We have seen good effects produced by both these appliances, in neuralgic and other cases. See *Magnetism*.

GAMBOGE. This well known yellow gum resin is the produce of an uncertain species of *Garcinia* found in the East Indies. It is powerfully drastic, cathartic, and hydragogue, very irritating to the stomach, and likely to cause vomiting; hence its frequent employment for the expulsion of the tape-

worm (for a description of the cut of which, here given, see *Worms*). Of most remedies for this parasite, Gamboge forms an ingre-



dient. It is not often given alone as a purgative, on account of its tendency to produce vomiting and griping; but, in combination with other cathartics, it operates more favourably; combined with Bi-tartrate of Potash, it is useful in dropsical affections; in solution with Alkalies, it acts as a diuretic. The dose of the Powdered Gum, as a full purgative, is from 2 to 6 grains; as an alternative from $\frac{1}{2}$ a grain up to 6 grains; of the Compound Gamboge Pill, and that of Gamboge and Seammony, the dose is from 1 to 3 five grain pills; of the Alkaline Tincture, we give from 30 to 60 minims; and of Swediaur's, or the Ammoniated Tincture, 1 drachm; this latter should be given with great caution. For the expulsion of worms, the following is a good formula: Of Gamboge, 10 grains; Sulphate of Iron, 6 grains; Lump Sugar, 20 grains; and Oil of Peppermint, 3 drops: 1 ounce to be taken every four hours, until the desired effect is produced.

GAME. By this term we usually understand most of the wild creatures, whether furred or feathered, quadruped or biped, which are the objects of pursuit with sportsmen; legally the term only includes Hares, Pheasants, Partridges, the several kinds of Grouse and Bustards. The Snipe, Quail, Landrail, Woodcock, and Coney, are not

game, strictly speaking, although they may not be shot by unlicensed persons. But it is with Game, as an article of diet, that we have here to do, and generally it may be recommended as safe and wholesome; as it contains a smaller proportion of oily and fatty matter than most flesh. It is too commonly, however, eaten in such a state of semi-putrefaction as to render it extremely objectionable; it may be known to be too "high" for safe eating when air bubbles are observed near the bones, and the meat, on being cut, gives out what can hardly be called a crackling sound, but a sensation, to the carver. This is owing to the evolution of Carbonic Acid gas, and in this state Game sometimes acts as an irritant poison. The best remedy is to give a full dose of Castor Oil, with about 20 drops of Laudanum, as the irritant matter will have passed beyond the stomach before the symptoms show its deleterious nature, and therefore emetics or the stomach pump would be useless. If there are colicky pains after this, give Calomel and Opium, 1 grain of each, about every quarter of an hour. The best way to preserve Game is to enclose a piece of charcoal in the body, out of which the viscera have been removed, close the skin by sewing, and tie a piece of string tightly round the neck to exclude the air; (for best methods of cooking, &c., see *Wife's Own Book of Cookery*.)

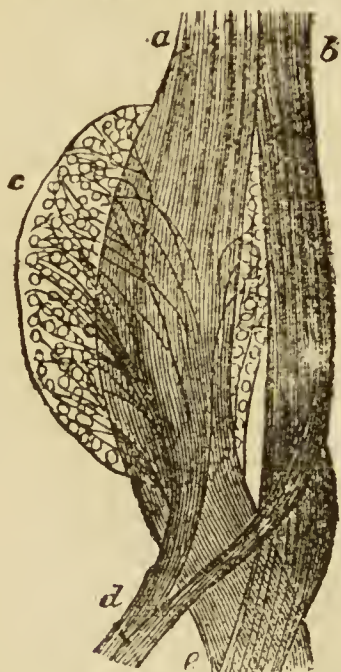
GANGLION (Greek *gagglion*, a nerve-knot). This is a knotted enlargement in the course of the nerves; it occurs, 1st, near the roots of the sentient nerves, including the larger portion of the fifth pair, and the posterior branches of the spinal; 2nd, in the sympathetic nerves, &c.

The several Ganglions of the body may be divided into 1st, those of the head; 2nd, of the neck; 3rd, of heart; 4th, of the chest; 5th, of the abdomen; and 6th, of the back; in most of these divisions there are several distinct Ganglia, but it would answer no good end to occupy our space with an enumeration of them. They are all well known to anatomists, and distinguished by particular names. (See *Nerves*.)

A morbid enlargement in the course of a tendon, or aponeurosis from effusion into the theca has also been termed Ganglion, or "small brains," as some have called it, from the likeness it presents to the cerebral convolutions.

It is to this kind of Ganglion that we must devote our attention chiefly, as it is the result of disease, and therefore open to treatment. This encysted elastic tumour, which is formed in the sheath of a tendon, generally makes its appearance in the hand or

the foot; it is not usually painful, but simply inconvenient, especially if, as is sometimes the case, it attains a large size, in that case it obstructs the necessary motion of the part, and by causing inflammation, produces pain. This Ganglion is usually the result of an accident, such as a sprain or bruise; it may be treated by compression and friction; Camphorated Mercurial Ointment may be rubbed in, or any stimulating liniment, and continued pressure maintained by binding a piece of sheet lead firmly over it with a bandage. This treatment, however, must not be persisted in if it causes inflammation, as Ganglions, when irritated too much, have been converted into fungous diseases of the most malignant character. When inflammation does ensue, and a fungus is thrown out, there must be no incision into the swelling, as that would be likely to cause ulceration and consequent sloughing. The plan often adopted for emptying the Ganglion of the thin glairy fluid, like the white of an egg, with which it is filled, is to give it a smart blow with the hand, or a small mallet, but this is very painful, and it is perhaps better to open it with a very fine knife, taking care to keep the air out, and then by keeping up the pressure for some weeks, the swelling will probably be reduced; but this must be done before inflammation ensues, and while the tumour is yet fresh. A Ganglion below the knee has



been sometimes cured by means of a blister; but when it resists all curative efforts, and becomes a source of real pain and inconvenience, it should be removed by dissection of the part, care being taken not to break the cyst and let the fluid escape, and also to remove every particle of the tumour.

Only a surgeon can perform this operation; and, indeed, the greatest professional skill and experience is required in the treatment of this disease. The accompanying cut will exhibit the structure of a true nervous Ganglion; it is that of the lumbar region, taken from a young dog, and rendered transparent by being soaked in an alkaline solution:—*a* is the posterior root of the spinal nerve, *b* its anterior root, *c* Ganglion on the former, *d e* junction of the fibres of the two roots with those coming from the Ganglion, and the posterior and anterior trunks of the nerve.

GANGRENE (Greek *graino*, to eat). The first stage of mortification, so called from its eating away the flesh. "Gangrene," says Sir Astley Cooper, "may be considered as a partial death—the death of one part of the body while the other parts are alive." Its causes are excessive inflammation, which occasions a destruction of vital power in the part or parts which it attacks; or it may be a less degree of inflammation acting upon a part the vital powers of which are feeble, locally so; or showing the general debility of a weakened constitution. In this case, Gangrene sometimes supervenes without any great amount of previous inflammatory action. A broken, or otherwise wounded, or ulcerated limb is most commonly the seat of Gangrene, or it may be the fingers or toes, after they have been frost-bitten or jammed, or in some way deprived of their nervous energy.

Symptoms.—When the result of high and active inflammation, there is severe pain in the part attacked, and generally a considerable degree of swelling; a blush overspreads the part, which gradually deepens to a dull purple, or brownish red; if there is a running sore, the discharge from it will cease; very soon the cuticle will be raised by a vesication, from which, on breaking, will issue a bloody serum, after which the skin assumes a decidedly gangrenous appearance, that is, it becomes of a dull yellowish green colour, and is perfectly insensible. During the progress of these changes there is great constitutional derangement, marked by a high degree of irritative fever, with a small, weak, quick pulse, generally irregular, and sometimes intermittent; often, too, there is vomiting and delirium, and hiccough, which is one of the most characteristic signs of the disease in its more advanced stage, especially when Gangrene arises from a diseased state of the constitution; then, as Sir A. Cooper remarks, "the stomach is extremely deranged, and this derangement of the stomach is followed by a

spasmodic contraction of the diaphragm, producing the cough. This symptom, therefore, does not arise from any alteration in the action of the diaphragm, but from its sympathy with the deranged state of the stomach." When Gangrene is the result of a low degree of inflammation acting upon a weak system there will probably be an absence of the febrile symptoms, or they will be but slight; there will be the same discolouration of the skin, vesication, discharge of bloody serum, and morbid appearance; this is also the case when the disease is produced by extreme cold.

Treatment. In the active inflammatory stage, local depletion by means of leeches should be resorted to, and also bleeding from the arm if the state of the patient's system is such as to warrant this; but not more than 8 ounces of blood should be taken at one time, lest the vigour of the circulation be too much diminished, and, as a consequence, the nervous power of the constitution also. Soothing fomentations and warm poultices should be applied to the part; Calomel, or some other mercurial preparation, should be administered, to keep the secretions of the liver and intestinal canal in a proper state, and opiates to tranquillize the system. When Gangrene is the result of cold, the treatment will be somewhat different. In this case the part affected becomes first white, and a restoration of the suspended circulation should be attempted by rubbing with Snow, if it can be procured; if not, with a coarse cloth or flesh-brush. No heat must be applied; even that of the bed-covering will sometimes set up inflammation. Camphorated Spirit of Wine is, perhaps, the best liniment that can be used. After the rubbing, if it appears to be at all effectual, apply cold poultices. If, in spite of these efforts, a discolouration of the skin shows that Gangrene has really commenced, apply some gentle stimulus to the part, such as a poultice of Linseed Meal mixed with Beer-grounds, and also Spirit lotions, to keep the disease from spreading. The constitution of the patient must be soothed and supported by some anodyne and stimulant: Sir A. Cooper recommends from 7 to 10 grains of Carbonate of Ammonia, with 20 or 30 drops of Tincture of Opium, two or three times a day, or more frequently if required. At Guy's Hospital, a bolus composed of 5 grains of Carbonate of Ammonia, with 10 grains of Musk, is given every four hours in such cases, with excellent effect. Bark was formerly much used, but Quinine has now taken its place. When the Gangrene has proceeded to a

sloughing sore, a Port Wine Poultice is a good application, as is Spirits of Turpentine, to stimulate the parts.

If, however, the Gangrene is not stopped in its first stages, it can seldom be after; and the only chance of saving the patient's life is to amputate the limb; and this must be done before the morbid influence has spread far towards a vital part. (See *Mortification*.)

Hospital Gangrene, known also by the various names of *Phagedæna*, *Gangrænosa*, *Gangrena contagiosa*, *Hospital Sore*, *Putrid* or *Malignant Ulcer*, is a combination of Humid Gangrene with Phagedenic Ulceration, sometimes occurring in crowded hospitals, and causing a fearful mortality among the patients. *Gangrena oris* is a disease which affects the cheeks or gums of infants; it also sometimes occurs in the *Pubenda* (which see).

GAPING or *Yawning*. Is a symptom of nervous exhaustion, and depressed circulation, which may arise from functional or organic disease, probably of the chest. We generally gape when we are tired, and the act sets others gaping also; this imitation is common in nervous affections. Previous to an attack of Hysteria with fainting, or of Spasmodic Asthma, there is often this symptom; and where fits of gaping are long and frequent we may always suspect the existence of heart disease.

GARGLE (Latin *gargarisma*, from the Greek *gargarizo*, to wash the throat). A lotion or wash for the throat. Its application is effected by taking a mouthful of the liquid, throwing the head back, by which movement it is passed into the throat, and then expelling the air from the lungs through it, agitating and causing it to wash every part of the inner surface. The nature of Gargles must depend upon the symptoms which they are designed to relieve; they may be astringent, demulcent, or cooling, according to the requirements of the case; if there is inflammation of the tonsils, a simple Warm Water or Gruel Gargle, with a little Vinegar, is perhaps the best to begin with; a common domestic form is Sage Tea and Vinegar, and this is very good: when the inflammation becomes more chronic, and there is much phlegm about the throat, the Gargle must be more stimulating and astringent; therefore, add to 6 ounces of Infusion of Roses, 1 drachm of Dilute Sulphuric Acid, and the same of Tincture of Capsicum, and use frequently: if there is relaxed uvula, dissolve 1 drachm of Alum in $\frac{1}{2}$ a pint of hot water, add 2 drachms of Tincture of Myrrh, and use; for chronic weakness, with

frequent tendency to inflammatory swelling, gargle with Decoction of Oak Bark, or a weak solution of Common Salt every morning: if there is ulceration of the fauces, the following is a good form: Take of Refined Saltpetre 2 drachms; dissolve in 6 ounces of Plain or Rose Water, and add Honey 4 drachms. Many other forms might be given, but the above will be sufficient; the more especially as others will occur under the heads of *Throat*, *Tonsils*, &c.

GARLIC (*Allium Sativum*). An account of the medical properties and uses of this well-known plant will be found under the head of *Allium*. Its only official preparation is the Syrup of Garlic, of which the dose is from 1 to 2 drachms. One great



objection to the use of this and other members of its tribe, is the unpleasant odour communicated to the breath: a powerful antidote to this are the seeds and aromatic leaves of parsley, and other plants of the *Umbelliferae*; they may be taken with or after it, but the former is best.

GAS. An old Teutonic word, signifying air or spirit, and now applied to any permanent aëriform fluid. Gases retain their elasticity in all temperatures, and are thus distinguished from *vapours*, which condense at a low temperature, and become *liquids* or *solids*; therefore, we call Gases, *Elastic* or *Gaseous Fluids*. The number of these is so great that we cannot give a complete list of them; neither would a general description be at all serviceable, as they possess, in

many respects, very different characters and properties, each Gas consisting of the ponderable matter from which its name is derived, and just that degree of specific heat necessary to its aëriform existence; thus some Gases are much more volatile than others; some are inflammable, some not; some mix readily with the air we breathe, and so enter into the circulation, producing beneficial or other effects, according to their nature; others hold themselves altogether apart from the surrounding atmosphere—they are in it, but not of it, and if brought into contact with the respiratory organs of man, or any other animal, cause immediate asphyxia, because they are unfitted for the delicate organization into which they enter; the most familiar example of this kind of Gas which we could cite is the *Carbonic Acid* (which see), although this is composed, to a great extent, of oxygen, which is necessary to animal life, yet having a large proportion of carbon, about one-half, it is mechanically too thick and ponderous to pass through the pores of the lungs, and administer to the vital necessities of the animal system.

Gases, in their various combinations, enter into the composition of almost everything we eat and drink; thus Oxygen and Hydrogen form water, and Nitrogen composes part of most animal matters, except fat and bone, as well as of most of the vegetable alkalies; although of itself fatal to animal life, yet it is an important constituent of the air we breathe, and of the nutriment on which we chiefly subsist. This is one of the apparent anomalies of natural philosophy; these are, perhaps, nowhere more numerous than in the world of gases, which are at once food and deadly poison; sources of light and heat, and of darkness, and cold; for instance, Sulphuretted Hydrogen burns with a bright flame; Azote extinguishes flame. There are several Gases which have an exhilarating effect upon the spirits, others cause depression and drowsiness, and death; some are so light and volatile that they rise, and rise, far above the atmosphere that immediately surrounds our earth, and if imprisoned in a silken bag, will even carry up a ponderous machine with its paraphernalia of sand bags and grapnels, and freight of daring aeronauts; others are so dull and heavy, that in the damp air of wells, and the deepest mines, they lie lowest, and refuse to rise. Gases pass hither and thither without sound or visible manifestation, and offer so little resistance that a feather waved in the gentlest manner will pass through, or set

them flying, and yet, combine them in certain proportions, enclose them in iron tubes or spheres, strike a sudden blow upon their prison, and there will be a thundering sound, and the exhibition of an explosive power greater perhaps than that of any known agent; Gun-cotton, Gunpowder, and the various detonating compounds all owe their wonderful and fearful effects to the liberation and expansion of Gases! Nay, may we not attribute the grand phenomena of thunder and lightning to the same cause? It would please us well to go fully into this subject and show how intimately connected are these invisible substances called Gases, which, some hurtful and some beneficial, ever surround us, like good and evil spirits, with all the terrestrial phenomena which we witness; but they would lead us away from the consideration of subjects with which we are now immediately concerned.

Dr. Priestley has discovered that Gases can pass through bodies that are perfectly impervious to common air, and this discovery has let us into the secret of how certain constituents of the atmosphere act upon the blood in the lungs. Dr. Mitchell has shown that Ammonia, a subtle and volatile Gas, passes through a certain membrane 160 times as fast as Carbonic Oxide; so we see that membranes may act as strainers, letting through some gaseous liquids, and retaining others. By combining the condensing powers of mechanical compression, with depression of temperature, Dr. Faraday has been able to liquify some Gases and solidify others, so that what was once an invisible vapour merely, floating in, or combined with, the atmosphere, may be presented to us in the form of solid white crystals. Some of the Gases, however, have never yet been reduced to a more dense and ponderous form than that of vapour. Hydrogen, Nitrogen, Oxygen, and Carbonic Oxide are among these; but to these incondensable Gases, the same law holds good as that which applies to common air—they all suffer diminution of volume in proportion to the pressure to which they are subjected. Ammonia; Azote or Nitrogen; Carbonic Acid; Chlorine; Hydrogen, simple, carburetted and sulphuretted; and Oxygen, are the Gases which principally concern the subjects of health and disease of which we have here undertaken to treat; and of these more particulars will be found under their several heads.

Of the effects of mephitic exhalations, or noxious Gases, arising from the decomposition of decayed animal or vegetable matter, we have already spoken, in treating of *Ague, Fever, Contagion, Drainage, &c.*,

(which see). There is one other branch of our present subject which is closely connected with sanitation, viz.: the use of Gas for lighting and cooking, which has of late become so prevalent; and on this we must offer a few remarks. The Gas commonly used for these purposes is the result of the destructive distillation, in closed vessels, of some organic inflammable substance, such as coal; it is a compound of Carbon and Hydrogen, and burns with greater or less brilliancy, according to the relative proportions of these constituents, and its freedom from sulphuric or other vapours. The Gas we generally burn is very far from pure; it is, in fact, Sulphuretted Hydrogen, as may be known by its disagreeable smell and tendency to blacken all with which it comes in contact; indeed, were it perfectly pure, it would be scarcely applicable to the various economical purposes to which it is now applied, although it might be, if much purer than it now is. There can be no question about the great advantage derived from lighting our streets and public buildings with Gas, whether in a moral, sanitary, or economical point of view; light is a great repressor of crime, flame a purifier of the atmosphere, and Gas must be cheaper and every way better than the old, clumsy, cumbrous, and inadequate system of oil-lamps. Still, grave doubts may be, and are entertained, as to whether the extensive use of Gas in the house is not prejudicial to health. We have been often asked this question by persons anxious to avail themselves of the advantages afforded by Gas, yet fearful of imperiling the health of themselves and families; and we have said to such anxious inquirers—"By all means, let the subtle fluid cook for you, and diffuse light, and warmth, and comfort through your dwellings. We would not exclude it even from the bedrooms, only take care that the house be properly ventilated, that there be a frequent admission of fresh air to supply the waste of oxygen which is consumed alike by the flame, and the lungs of the breathers in a confined space, and to dissipate the deleterious fumes which arise from the consumption by heat of either Gas, or any fatty matter, and perhaps more thickly from the latter than the former." Where artificial light must be had, it is better supplied by Gas than by any other agent with which we are at present acquainted, and in a properly ventilated house it can scarcely be used too extensively. We have it in our own bedroom, often burning all night, the branch is near an open fireplace, and this should always be managed if pos-

sible. In sick rooms or nurseries, where a light is always required, how much better is this than rushlights, floating-wicks, or any other contrivances. It may be reduced to a mere speck; and, in an instant, increased to any required extent. By the addition of a slight wire framework to the pipe, to support a tin or other vessel, water, or any kind of food, may be kept hot, and so the necessity for a fire obviated. Depend on it there is no night-lamp like a Gas-lamp, and for lighting, and at the same time warming a house in winter, there is no agent like Gas: the air which it heats and rarifies ascends to the upper part of the room, and if it has there a means of escape, it will carry off the deleterious particles with it, and the fresh air occasionally introduced by the opening of the door, will freshen the lower atmosphere and keep it supplied with the life-sustaining principle. For Gas cooking, as well as lighting, the most convenient apparatus can now be had at a trifling cost; and leaving our readers to judge for themselves, as they easily may do, of the merit of these various contrivances, we again say—By all means *burn Gas*, and as an inducement for them to do so, we add a few practical directions from “Facts for Everybody*.”—“In situations where Gas is to be obtained, it forms a ready, and, for some purposes, very economical means of obtaining heat; its economy does not arise from its cheapness compared with other means, but from the fact that it need not be

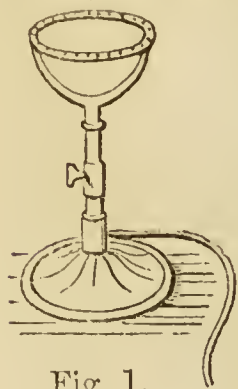


Fig. 1.

lighted till the instant it is required, and can be as quickly extinguished when it has done its required duty. For heating any vessels containing liquids, especially if the heat is required to be only of short continuance, Gas will be found extremely advantageous; a ring-burner, constructed as shown in fig. 1, less than three inches in

following: a circular hole, from two to four or more inches in diameter, is cut in the

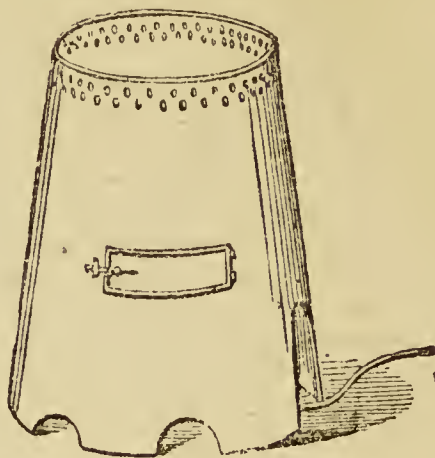


Fig. 2.

dresser, through which is passed a sheet-iron tube, supported by three little elbows. This tube projects a few inches above the table, and about a foot and a-half below; its lower end is open, and into it projects a Gas-pipe, furnished with a stop-cock; the upper extremity is covered with a sheet of wire gauze, similar to that used for blinds, on which, as shown in fig. 3, may be placed some

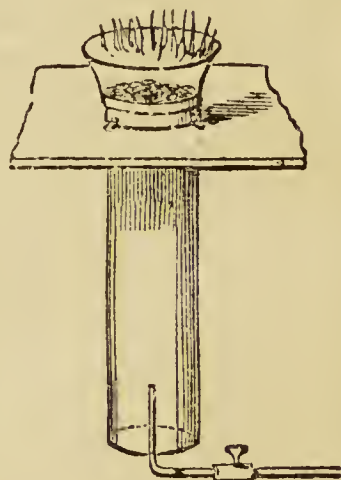


Fig. 3.

pieces of pumice-stone, surrounded and kept together by a broad ring—neither the pumice-stone nor the ring, however, are essential parts of the contrivance. The action of this arrangement is as follows:—When the Gas is turned on it escapes from the pipe rising through the tube, and mixing with the air contained within it; this mixture then escapes through the wire gauze, and may be lighted on its upper side, without passing through it to the Gas below. The flame should be perfectly free from smoke, which indicates too much Gas—should be pale, colourless, and not soil any bright metal placed in it. If the flame is in the slightest degree yellow, it will do this, and then the Gas should be partly turned off; on the contrary, if there is not enough Gas, the flame will be extinguished. When lighted the pumice becomes red-hot, and throws out a great heat. When used in boiling, the vessel should be supported a short distance over the flame by a trivet; if it is made to

“For the domestic use of Gas in heating, there is no contrivance so useful as the

* Published by Houlston and Wright.

rest on the top of the ring, and is sufficiently large to close it entirely, the current is stopped and the flame extinguished, whilst the unburned Gas still escapes below. This contrivance is most useful, it is lighted in an instant, is perfectly free from smoke, and no unburned Gas escapes; it throws out great heat; and may be employed to heat bright tools with much more convenience than a charcoal fire. The objections to its use are, that, in burning, it produces, as all gas does, a quantity of carbonic acid gas, deteriorating the air, and that the flame cannot be very much enlarged or diminished; so that if fires of different power are required, two or more of the contrivances must be put in order. Otherwise, the instantaneous action, small cost, great heating power, and cleanliness of the plan, strongly recommend it. In summer weather, in many small families, it can be made to dispense altogether with the use of a fire. By a little variation, the whole contrivance may be made to stand on the table like fig. 1. In this and other cases, vulcanized India-rubber will be found to form by far the best kind of flexible tube, being quite impervious, very durable, and excessively pliant. Those who wish to try the experiment of heating on this plan may readily do so by covering the top of the glass chimney of any common burner with a piece of wire gauze, folding it over the sides; the Gas may then be turned on, and lighted above the gauze, after it has mingled with the air in the chimney; a small burner, however, does not afford sufficient Gas for the purpose, and there being too much air, the flame is weak and liable to go out."

GASCOIN'S BALL OR POWDER. A composition of Bezoar, with Gypsum, or of Pipe-clay tinged with Ox-gall; it possesses astringent and absorbent properties, and was once a favourite remedy for relaxed bowels, especially resulting from the irritation of teething in children; it is now but little used.

GASTRIC (Greek *gastor*, the stomach). Appertaining to the stomach, the digestive fluid which is termed the *Gastric Juice*; the peculiar office of this acid, viscous secretion, is the reduction of the albuminous and gelatinous portions of the food to a state fit for absorption into the system. Gastric Acid is a term which has sometimes been applied to this fluid, and sometimes to a mixture of Muriatic and Vegetable Acids. See *Aliment, Digestion*.

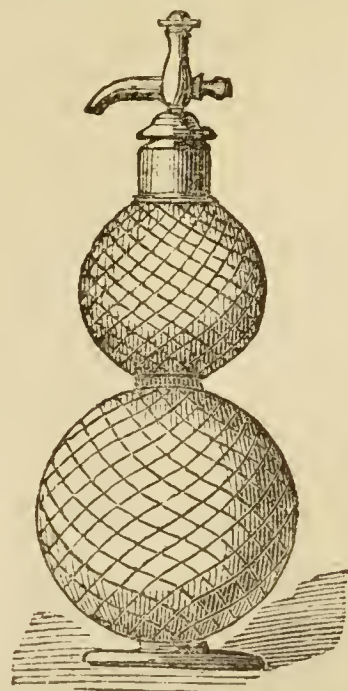
The most remarkable quality of this secretion is its solvent power, which it possesses even when taken out of the body, it has also an antiseptic property, as it suspends

putrefaction, and restores the freshness of tainted meat: analysis shows it to consist of an organic substance called *Pepsine* (which see), another substance resembling extract of flesh, a matter resembling saliva, free acids, especially muriatic, mucus, a little albumen, and various salts.

GASTRITIS comes from the same root and signifies inflammation of the *stomach* (which see). Then we have also *Gastrocele*, Hernia of the stomach; *G. enemii*, muscles, of which the calf of the leg is chiefly composed, (see *Leg, Muscles*); *Gastralgia* or *Gastrodynia*, pain in the stomach; *G. enteritis*, inflammation of the gastro-intestinal mucous membrane; *G. epiploic*, belonging to the stomach, or omentum, applied to a branch of the hepatic artery, lymphatic glands of the abdomen, &c.; *G. raphe*, a suture uniting a wound of the belly, or of some of its contents; *G. splenic omenta*, a term applied to the laminae of the peritoneum, which are compressed between the spleen and the stomach; *G. tormia*, the operation of opening the abdomen. (See *Cæsarian operation*).

GASTROTOMY, also, signifies the act of cutting open the body: an operation sometimes resorted to in desperate cases, such as a rupture of the uterus, and escape of the child into the peritoneal cavity, in which case it is the only chance for life; the sewing up of the abdomen after such an operation would be called *Gastroraphy*; and an examination of the abdomen to detect disease, *Gastroscoopy*.

GAZOGENE. A convenient portable ap-



paratus for producing effervescing beverages such as Soda-water, Ginger-beer, Lemonade,

&c., which by its aid can be made fresh and sparkling, and at a trifling cost. We give a cut of this simple machine and recommend it strongly, not only as an adjunct in the treatment of the sick, but for general family use. Any chemist and druggist can furnish it.

GELATINE (in Latin *gluten animale*), is glue or jelly, prepared in digesters from the skin and bones of various animals; it consists chiefly of *Gluten* (which see), and is highly nutritious. It was not long since a fashionable remedy for intermittent fever, but, except in so far as it strengthens the general system, and so enables the patient to withstand the disease, is of no virtue whatever. To diminish the acrimony of saline and sulphurous baths, or to make a simple emollient bath, it is sometimes used, from 12 to 24 ounces of it being dissolved by heat in a quart of water, and then added to the bath. *Isinglass* and *Jelly* are two well known forms of Gelatine, of which we shall speak under their proper heads. (See also *Glue*, *Size*).

Gelatine has of late been much used in the preparation of capsules in which *Copaiba*, *Cod Liver*, and *Castor Oil*, and other medicines likely to cause nausea, may be taken without being tasted; also as a coating for pills of various kinds. The soluble Gelatinous Capsules, and the Gelatined Pills may be obtained of any druggist. The superior kinds of Gelatine, as now manufactured, may be considered as nearly as good as isinglass, for which its comparatively low price renders it a most acceptable substitute; it does not answer quite so well for the finer kinds of jellies, *Blanche-mange*, &c., but for all ordinary purposes it may be used. A jelly made from any animal substance containing gelatine, or sometimes a vegetable substance containing gum combined with acid, is termed *Gelatinia*.

GELATIO (Latin *gelu*, frost). Applied to *Frost-bite*, the effects of which are sometimes exhibited in horrible and fearful forms, such as the complete rotting away of the extremities, the loss of the nose, and other projecting parts. Those who travel to extreme northern latitudes not unfrequently suffer such disfigurements, and the chances are that, if once attacked and prostrated by the icy power they will not escape with their lives, for a usual consequence is *Gangrene* (which see).

In this country cases of Gelatio sometimes occur; we have known of several; one of them was a coachman, who, on one of the coldest days of the winter of 1855, was kept for five consecutive hours on his box, off

which he had to be helped, being like one frozen stiff; his feet were so entirely devoid of feeling that he could hold them close to a fierce fire without experiencing any sensation of heat; this he very foolishly did, instead of applying friction and gradual warmth, and hence, perhaps, the sad result: his feet soon became entirely rotten and black; they dropped off piece by piece and left the ends of the bones, the tibia and fibula quite bare. Another case occurred in the same year and was treated at the same hospital—Guy's. The patient had been employed shovelling away snow from a door step; he felt a little shivery, and his fingers were quite numbed, and after this he could get no life into them; they shortly became as black as charcoal, and dropped off one after another, and left only the stump with five ulcerous sores. Both these men were previously in a bad state of health, and there was consequently a want of vigour in the system for the necessary reaction; probably, too, the cases would have fared better if the proper remedial measures had been early applied. The first effort in all these cases should be to restore the circulation by friction with pounded ice or snow; by no means should heat be applied until there are symptoms of returning vitality to the part, and then it should be very gradual. The patient must have stimulants, hot Spirits and Water. Brandy is the best, and *Ammonia* (the Aromatic Spirits), about 30 drops in Peppermint Water; or, if Plain Water, with 20 drops of Tincture of Ginger. Warm bathing and swathing in flannels is also beneficial; but friction is the main thing to depend on. See *Gangrene*.

GEMELLUS (dim. of the Latin *geminus*, double). The name of two muscles of the thigh, situated below the *obdurator externus*; they are sometimes called *musculi gemini*. See *Thigh*.

GENERATION (Latin *genero*, to beget). Reproduction of the kind or species. In the human race, as throughout the greater part of the animal kingdom, this is accomplished by *Fecundation*, or the effect of the vivifying fluid provided by one class of organs, upon the germ contained in the seed, or ovum, formed by another class, in the opposite sex. This germ when fecundated is termed the *embryo*. The process consists of *Impregnation* in the male, *Conception* in the female.

The organs of generation in the male are:—1. The *Testes* and their envelopes, viz. the *Scrotum* or cutaneous envelope, the *Dartos*, which corrugates or ridges the scrotum, and the Fibrous and Vaginal tunics;

we must also here include the *Epidermis*, above the testes, the *Vas deferens* or excretory duct, and the *Spermatic chord*; 2. *Vesiculæ seminales*, forming a canal situated beneath the bladder; 3. The *Prostrate Gland*, surrounding the neck of the bladder and the commencement of the urethra; 4. *Cowper's Glands*, a pair situated below the prostate; 5. The *Ejaculatory Ducts*; 6. The *Penis* (which see).

The Female organs are:—1. The *Vulva* or *Pubendum*, the external parts comprehending the *Labia pubendi* (lip), the *Cli-teris*, situated at the middle and superior part of the pubendum; the *Nymphæ* or *Alæ minores*; the *Urethra*, which terminates in the *Meatus urinarius*, opening into the *Vagina*, which is occupied by the *Hymen*, a semilunar fold, or the *Caruncula myrtiformis*, its lacerated remains after the first act of copulation; and the entrance into the vagina, termed the *Os externum*, so called to distinguish it from the *Os internum*, or orifice of—2. The *Uterus*, whose appendages are—the *Ligamenta lata* (the broad ligaments, sometimes called *Alæ vespertilionum*), and the round ligaments commencing immediately before and below the *Fallopian tubes*, which extend to the *Ovaria*. We abstain from giving cuts of these several parts and organs for sufficiently obvious reasons; in a book intended for family use they would be altogether objectionable. With regard to the diseases which more immediately affect them, a few simple remarks will be made under their several heads; but we would here impress upon our readers the necessity of at once seeking medical advice for all affections of the genital organs. It is in the treatment of this peculiar class of diseases that advertising empirics reap their richest harvest, entailing the greatest present sufferings, and most fearful after consequences upon their too credulous dupes.

GEUM URBANUM. The common Avens, or Herb Bennett, a plant of the natural order, *Rosaceæ*; possesses astringent, antiseptic, and tonic properties, and has been used as a substitute for cinchona in agues, a drachm of the Powder being given every two hours in the intermissions. For diarrhoeas, dysenteries, and the latter stages of continued fevers, a wineglassful of the Infusion has been taken two or three times a day with good effect; it is made by pouring a pint of boiling water on $\frac{1}{2}$ an ounce of the root.

The *Augsburgh Beer*, which is much prized on the Continent, is said to owe its peculiar excellence to the custom which

prevails of putting a small bag of this plant into each cask.



GENIO GLOSSUS (Greek *genion*, the chin, and *glossa*, the tongue). A term applied to the muscles situated between the tongue and lower jaw. From the same root comes *Genio hyoides*, a muscle attached to the mental process of the jaw, and to the *os hyoides*. See *Jaw*.

GENISTA TINCTORIA, (often called Small, or Petty Broom). A plant sometimes recommended for hydrophobia; given in the form of Decoction; it does not appear to be worthy of much confidence.

GENITO-CRURAL. The name of a nerve proceeding from the first lumbar, and dividing into two branches, the internal and the external, the former of which accompanies the spermatic chord, and the latter is distributed into filaments of the crural arch. See *Organs of Generation*.

GINSENG. The *Panax Quinquifolium* of botanists. A plant so highly valued in China that no medicine is considered efficacious of which it does not form a part; in Europe, however, it is not much valued. Its properties appear to be tonic and anti-

spasmodic. The general form of administration is a Decoction of the root.



GENTIAN (Latin *Gentiana*). The dried root of the *Gentianis Lutea* is one of the



most deservedly valued of our bitter vegetable tonics ; it is especially useful in states of exhaustion from chronic disease, and all cases of debility of system, unconnected with excessive irritability of the stomach. It has also febrific, anthelmintic, and antiseptic properties, and as a warm stomachic tonic stands perhaps unrivalled. The forms in which it is exhibited are the Powdered Root, dose from 10 to 20 grains (this is sometimes sprinkled on foul sloughing ulcers) : the Extract, 5 to 20 grains ; the Infusion, made by macerating 2 drachms of the root, sliced or bruised, with a little dried Orange Peel, in a pint of boiling water for a couple of hours or so ; dose, 1 to 2 ounces ; Mixture, the same dose : Compound Tincture, 1 to 2 drachms : Wine, about 3 drachms. There is also a mixed substance called *Gentianina*, of which from 1 to 3 grains are given at the time. It is of this root that the publicans make their "Bitters," either by steeping it in brandy or other spirits, or by employing the Tincture to impart the needful bitterness to the spirits. By far the best preparation, however, is the Infusion, which may be made to keep any length of time in the following manner :—Take 4 ounces of sliced Gentian Root, and 1 ounce of dried Orange Peel, and pour upon them a quart of boiling water, let it stand about 3 hours, strain off the liquid, and pour in another quart of water, repeating this process three or four times, until the strength of the ingredients is exhausted ; then put the whole of the strained infusions together in a saucepan, well lined or porcelain inside, and boil down to a single quart ; to this add 2 ounces of Alcohol, which will coagulate the mucilaginous constituents of the Infusion, which may be separated by straining, so as to leave it perfectly clear ; bottle and cork it tightly, when required for use add 1 teaspoonful to an ounce of water for a dose. The Concentrated Infusion may also be had of any chemist.

GEOFFROYA, a name given to the Cabbage Tree of Surinam—botanical name *Geoffroya inermis*, or *Surinamensis* ; the bark of which is purgative, emetic, and acro-narcotic ; it is only used to expel round worms, and for that purpose but seldom. The dose of the Powder is from 10 to 30 grains ; of the Extract 3 grains ; of the Decoction from $\frac{1}{2}$ a drachm to $1\frac{1}{2}$ for children ; from $\frac{1}{2}$ an ounce to an ounce for adults. (See cut next page).

GEORGIA BARK. The bark of the *Pinckneya pubescens*. An American plant, sometimes used as a substitute for Peruvian Bark or Cinchona.



GERANIUM (Greek *geranos*, a crane). The name of a genus of plants called by botanists Crane-bills, from the peculiar con-



formation of their seed vessels. Every one is familiar with the cultivated varieties; but few, perhaps, are aware that some of the wild species are medicinal. The pretty little Herb Robert, whose slender red stalks, deeply-indented leaves, and pink flowers, may be seen so plentifully adorning our fields and waysides in the summer, has properties which render it useful in internal hæmorrhages. There is also another kind found wild in North America, and called *Geranium Maculatum* (spotted Geranium) whose root is called Alum-root, on account of its astringency.

GERONTOXON (Greek *gerontos*, an old man, and *toxon*, a bow). The opaque circle or semicircle which appears in the cornea of old persons: we generally call it *Arcus senilis*. See *Eye*.

GESTATION (Latin *gestatio*, the act of bearing young in the womb). This is the state or condition of *Pregnancy* (which see). We speak of it as *gestatio uterina*. Besides the true kind, there are four kinds of erratic, or extra uterine gestation, viz.—1. The *abdominal*, in which the foetus is lodged in the abdomen; 2. The *interstitial*, in which it is lodged among the interstitial elements of the uterus; 3. The *ovarial*, in which it is developed in the ovarium; 4. The *tubular*, in which it is lodged in the Fallopian tubes.

GIDDINESS, or *Dizziness*, in medical language, *Vertigo*, (which see). With this sensation many of our readers must be familiar; it is a confusion of intellect, which generally comes on suddenly, and a loss of power to balance the body: persons apparently in a good state of health sometimes experience it; and when they do so they may be sure that there is some internal derangement which ought to be attended to. A little aperient medicine will probably remedy the mischief, if it be not a symptom of organic disease, affecting the heart or brain, and causing disorder in the circulation. Giddiness is symptomatic of congestion of the brain, epilepsy, bilious derangements, all kinds of fevers, and debility of the system; it generally comes on previous to a fainting fit, or an attack of apoplexy, but may be a consequence of weakness merely, or of disordered circulation, from lying too long in horizontal positions. Its repeated occurrence should be viewed with alarm, and medical advice sought.

GIN, (*Geneva*, or *Hollands*). This is a spirit too well known, and extensively used in this country to need any description. Containing a considerable portion of Oil of Juniper, it acts medicinally as a diuretic: when tolerably pure, it is not unwholesome to those

whose urinary organs require stimulating; but if they are already sufficiently active it is prejudicial. But how small a proportion of the spirit offered to the public really is what it professes to be! Gin, as commonly sold, is a vile compound of greatly diluted spirit, with Capsicums, or other pungent materials, to give it a fictitious strength; and Oil of Vitriol and Almond Oil, in due proportions, to give it body, and make it bead when poured out: perhaps, too, there may be a little Turpentine to make up for the deficiency of the more expensive Oil of Juniper. Properly it should be made of the spirit procured from Barley, or some other grain, and Juniper berries. How it is made, the great distillers, the spirit merchants and the publicans can alone tell. It first came into use as a diuretic, and then grew into favour as a cordial stimulant, and is now the bane of the lower classes of this country, among whom Gin drinking has increased to a fearful extent of late years, so that the judicious medical adviser is almost afraid to recommend it—even in cases where he knows it would be serviceable—lest the taking of it should grow into a habit, which might by-and-bye obtain the mastery. In all cases in which Gin would be serviceable, a diuretic medicine composed as follows would probably be more so:—Take of Oil of Juniper, 1 drachm; Sweet Spirits of Nitre, 2 drachms; Oil of Cloves, 6 drops; Simple Syrup, 1 ounce; Water sufficient to make 6 ounces; take 2 table-spoonfuls when required. See *Diuretics, Fermented Liquors, Spirits*.

GINCKOIC ACID. An acid discovered in the fruit of the *Gincka Biloba*. We are not aware of its having been applied to any useful purposes.

GINGER ROOT (Latin *Zingiberis radix*). The *Zingiber Officinale*, belonging to the natural order *Zingiberaceæ*, is a plant found in the East and West Indies, possessing stimulant, carminative, and stomachic properties, which render it extremely valuable alike to the physician and the domestic economist. Its active constituents consist of a volatile oil and a soft acrid resin; its aromatic smell and burning flavour are well known. Combined with purgative medicines, it corrects their griping tendency, and it acts externally like mustard, as a rubefacient, even to the extent of raising a blister. In flatulency, colic, dyspepsia, and gout, it is given with manifest advantage; the dose of the Powder is from 10 to 30 grains, and, for either of the above disorders, it should be taken with 5 grains of Carbonate of Soda. Besides forming a subordinate ingredient in many other officinal preparations,

it is the principal in those which bear its name, such as the Etherial Extract of Ginger—dose, from 1 to 2 grains; Tincture, from 1 to 2 drachms; Syrup, from 1 to 4 drachms: the latter is seldom or ever taken



by itself, but used to sweeten and flavour medicines or beverages; a table-spoonful of it added to a glass of Soda Water, is both pleasant and beneficial. The common drink called Ginger Beer is one of the most wholesome beverages which can be taken, if it is properly made, and not suffered to get stale; but much of that sold, especially at the low price of 1d. per bottle, is most unwholesome: good Ginger Beer cannot be made to sell at that price, and yield a profit to the vendor. Good receipts for the preparation of this beverage, and others into the composition of which Ginger enters, also for Gingerbread Cakes and Puddings, will be found in the *Practical Housewife*, a cheap manual of domestic utility, published by Messrs. Ward and Lock. We quote here, as immediately connected with our subject, the form for *Medicated Gingerbread Nuts*, in which disguise children may often be induced to take a required purgative without much trouble—3 drachms of Jalap, $\frac{1}{2}$ pound of Flour, 5 ounces of Treacle, $\frac{1}{2}$ ounce of moist Sugar, $\frac{1}{4}$ ounce of Ginger, 2 ounces of Butter, and the rind of a Lemon, cut small; mix, and divide into 30 nuts; bake, and keep in a canister in a dry place; give 1, 2, or 3, as may be required.

GINGLYMUS (Greek *gigglymos*, a hinge). An articulation of bones admitting of

flexion and extension; commonly called a hinge-joint. See *Joints*.

GLABELLA (Latin *glaber*, smooth). The space between the eyebrows; hence we have, what was termed by Barclay, the *glabellar* aspect of the head.

GLAIRINE. This, according to some, is a gelatinous vegetable matter; it resembles the glaire or white of an egg. Some regard it as a kind of pseudo-organic substance, such as forms on the surface of mineral waters.

GLAND (Latin *glandula*, diminutive of *glans*, or *glandis* an acorn). "An organ of the body, in which secretion is carried on, and which consists of a congerie of blood-vessels, nerves, and absorbents." Thus it is that Brande describes these organs, of which Raspaille observes, that "some of them are a kind of stomach, whose province it is to elaborate in their cells a substance tending to organize; others are a kind of bronchiæ or gills, destined to purify the fluids tending to organize."

Glands are variously designated,—

1st. From their forms—the *conglobate*, or simple, a nearly globular form, and subsisting by itself; the *conglomerate*, or compound, composed of various glands, as the salivary, parotid, pancreatic, &c.; the *concatenate*, linked together, so as to present the appearance of a chain, as the kind of knotty chord in the necks of children, extending from behind the ear to the collar bone.

2nd. From their functions, as the *lachrymal*, that which secretes the lachrymæ, or tears; these are of various forms, the *chylipoietic*, or chyle forming, such as the salivary, that is the parotid, the sub-maxillary, and the sublingual; the liver, and pancreas.

3rd. The *mucous* Glands, or Follicles, those which are seated in the course of the mucous membranes; those of the intestines are *clustered*, or *agminatæ*, and the *isolated*, or *solitaræ*; the first are sometimes termed *Peyer's*, after their discoverer, and the last *Brunner's*.

4th. The *sebaceous*, or *cutaneous* Glands; those of the skin. 5th. The *lymphatic*; and 6th, the *mesenteric*. These last are conglobate glands, situated respectively in the course of the lymphatics and lacteals.

Then there are the *Glands of Pacchioni*, a name given to certain granulations found in the superior longitudinal sinus of the membranes of the brain, and so called after their discoverer.

There are two primary divisions under which the glands are commonly placed;

these are—1st, those employed in secreting some particular fluid for the use of the body, such as the *Liver*, which secretes bile, and purifies the blood; the *Kidneys*, which secrete urine; and the *Salivary Glands*, which secrete the saliva. 2nd—the *Absorbent Glands*, and vessels whose office is to carry off the waste materials of the machine. The *Pancreas* and the *Spleen* should also be placed in the first of these divisions, although their peculiar offices in the animal economy is somewhat obscure; (see the above several heads).

Glandular Swellings are not unfrequent, especially in weak and scrofulous persons; they often occur in the neck, and under the arm as well as elsewhere. Stimulant applications, and a general tonic course of treatment should be resorted to in such cases. Salt water bathing, and drinking mineral waters, are among the most efficacious remedies. If these cannot be obtained, let the patient take a mixture like this:—Sulphate of Iron, 12 grains; Sulphuric Acid (diluted), 1 drachm; Sulphate of Quinine, 24 grains; Tincture of Ginger, 2 drachms; Distilled Water, sufficient for 12 ounces: take a tablespoonful three times a day, with good nourishing food. If the bowels are at all confined, add to the mixture 6 drachms of Sulphate of Magnesia. Paint the swollen part with Tincture of Iodine every night.

GLANDERS (sometimes called *Farcy*). This is a malignant disease occurring in animals of the equine race, such as the horse, the ass, and the mule, which man is liable to contract; certainly by inoculation, perhaps, by simple contact with the skin. It is a horrible and loathsome disease, and very commonly proves fatal, and therefore no risk should be run; an animal affected by it should at once be killed, and the body buried. The chief symptom of its presence in the animal is inflammation of the lining membrane of the nostril, which becomes ulcerated, and emits a bloody, foetid, sticky, yellowish discharge, should any of which come in contact with an abrasion on the skin of any person, or be even suffered to remain on sound skin, and, especially, if snorted into his eyes, mouth, or nostrils, it is almost sure to convey the disease. A week or two may probably ensue after this inoculation before it is manifested; then there will be febrile symptoms, probably vomiting and diarrhoea, indicating the presence of a poison in the system; small ulcerating tumours will form under the skin in various parts of the body, and the peculiar viscid discharge from the nostrils, which is the characteristic of the disease, will com-

mence. No domestic treatment will be of service here; a surgeon should at once be consulted.

GLANS PENIS. The vascular body forming the apex of the *Penis* (which see).

GLASS GALL. The saline scum which swims on the surface of molten glass when first made; it is sometimes used as an ingredient in tooth-powder, and is variously called *Sel de Verre*, *Fel Vitri*, and *Sandiver*.

GLASS MAKER'S SOAP. See *Manganese*.

GLAUBER'S SALTS, (Sulphate of Soda). A saline aperient and diuretic, much used before Epsom Salts came into vogue, and still employed to a certain extent; it is more nauseous than the later preparation, and apt to gripe; it is obtained by saturating Sulphuric Acid with Carbonate of Soda, and also by neutralizing any excess of acid which remains in the salt after the distillation of Muriatic Acid; it is sometimes found on the surface of the earth, and is a component of most mineral waters. The dose is from $\frac{1}{2}$ an ounce to 12 drachms, dissolved in a considerable quantity of water.

GLAUBERITE. Is a crystalized salt, consisting of the Sulphates of Lime and Soda in nearly equal proportions; they are both of them nearly anhydrous, that is, without watery particles. We are not aware that it has been applied to any medicinal purposes.

GLAUCOMA (Greek *glaukos*, azure). A name formerly given to Cataract of the Eye, on account of the greenish or grey opacity of the vitreous humour observable in that disease. See *Cataract*, *Eye*.

GLAUCUS (Greek *glaukos*, blue). From this root we have:—1. *Glaucic Acid*, an acid procured from the teazle and scabious, by treating the alcoholic tincture with ether, and the precipitate thence arising, first with subacetate of lead, and then with sulphuretted hydrogen, and lastly with heat: 2. *Glaucina*, a term applied by some to the natural form of small-pox, on account of the blueness of the vesicles; 3. *Glaucosis*, humoral opacity, called by the Greeks *Glaucoma*, and by the Romans *Glaucedo*.

GLEET (Saxon *glidan*, to run softly; old writers called it *glitt*). The transparent mucous discharge which frequently follows *Gonorrhœa*, (which see), also *Syphilis*.

GLENOID (Greek *glene* a cavity, and *eidos* likeness). The name of a part having a shallow cavity, as the socket of the shoulder joint; a fissure and foramen of the temporal bones; a ligament, &c.

GLIADINE (Greek *glia*, glue). Vegetable

Albumen; one of the constituents of *Gluten*, (which see), also *Zymome*.

GLOBULES (diminutive of the Latin *globus*, a ball). The red globules constitute the colouring matter of the *Blood* (which see). In the practice of Homeopathy the infinitesimal doses of medicine are administered in the form of Globules, about as large as a pin's head. See *Homeopathy*.

GLOBUS HISTERICUS is that peculiar sensation, as of a ball rising in the throat, which is a characteristic of *Hysteria*, (which see).

GLOMUS or **GLOMERIS** (Greek for a clew of thread). A convoluted bundle of *Glands*, (which see). *Glomeration* is a term sometimes applied to a *Tumour*, (which see).

GLONIN, or *Nitro-glycerine*. Nitrate of Oxyde of Glycil is prepared by slowly dropping pure glycerine into a mixture of equal parts of strong nitric and sulphuric acids, stirring well after each addition. 3 fluid ounces of glycerine to 8 of nitric, and 8 of sulphuric acid, is a good proportion. The vessel should be surrounded with pounded ice, and any rise of temperature carefully avoided: after allowing the mixture to stand for some time, an oil will be found floating on the surface, which must be separated, and well washed with water by decantation. The oil should be then dissolved in a small quantity of ether, and the ether allowed to escape by spontaneous evaporation. The substance thus obtained is a heavy oil of an amber colour, very slightly soluble in water, but exceedingly so in ether. It has a sweet pungent aromatic taste, and when placed on the tongue, even in a very small quantity, produces headache, which lasts for several hours. When a small piece of blotting paper moistened with a few drops of it and placed on a smooth anvil is struck, with a hammer, a violent explosion is produced. If, on the contrary, a little of it in a piece of paper, is introduced into the flame of a candle, the combustion takes places quietly. When boiled with aqueous potash, Nitro-glycerine is decomposed, glycerine and nitrate of potash being formed; Mr. Squire, who gave the above account of this new preparation, says the word Glonoin gives no idea of the nature of this substance, and "Nitrate of Oxide of Glycil" is quite inadmissible; its proper name is, Nitro-glycerine.

GLOSSA or **GLOTTA** (Greek for the tongue). From this root we have the surgical terms *Glossitis*, inflammation of the tongue; *Glosso*, applied to the nerves, &c. of this organ, as *G. pharyngeal*, the ninth pair of nerves; *G. catochus* (Greek *katoko*, to hold down) an instrument for depressing the

tongue; *G. cele*, (Greek *kele*, a tumour), an abscess of the tongue; *G. cornum*, (Greek *korneo*, to guard), a term formerly applied to a case for the tongue of the hautboy, and now sometimes to a long box or covering for a fractured leg.

GLOTTIS. The aperture between the arytenoid cartilages, by which the air passes down into the trachea; it has a cartilaginous covering, termed the *Epiglottis* (which see); also, *Larynx* and *Tongue*.

GLUE, or GLUTEN. The former is the commoner kind of *Gelatine*, (which see). The latter is the viscous substance obtained from wheaten flour; it is the azotised principle which exists in all kinds of grain, and corresponds to the fibrin of animal bodies; it is consequently highly nutritious: by decomposition, it may be divided into *Gliadine* (see opposite page) and *Zymome* (which also see). There is a vegetable milk, obtained by incision from the cow-tree of Caraccas, which is called *Glutinose*, or milky sap. *Glutine* is a principle which resembles Gluten, but it is insoluble in alcohol.

GLUTÆUS (Greek *gloutos*, the buttock). Applied to three muscles of the hip, forming part of the buttock: they are the *maximus*, which extends up the thigh; the *medius*, which acts in the standing position, and the *minimus*, which assists the others. From the above root we have also the term *Glutæal* applied to the posterior iliac artery; to the lymphatics, on the course of that artery, and to a nerve distributed to the glutæic muscles.

GLYCERINE. This is an oily looking, almost colourless fluid, which has of late come very much into use as a therapeutic agent; it is a waste product of the fatty matters employed in the manufacture of candles, and in that of soap plaister. It does not readily evaporate at the ordinary temperature, and therefore forms a moist and pleasant covering for the skin, in many of its diseases; its healing as well as protective properties render it peculiarly applicable as a dressing for bruised or excoriated surfaces, to which it may be applied with a camel hair brush; where there is harshness, dryness, or a scurfy state of the skin, a lotion composed of Glycerine 1 part, to 15 parts of Plain, or Elder-flower water, is very serviceable. For chapped hands, cracked lips, &c. we can recommend the following Glycerine Paste:—First dissolve 1 drachm of Powdered Borax in 1 ounce of Rose Water, add to it $\frac{1}{2}$ an ounce of Glycerine; melt 1 drachm of Spermaceti, in the same of Olive Oil, and 10 drachms of pure Lard; add the solution to the fat little by little, stirring all the time,

and continuing to do so until nearly cold. In deafness and other affections of the ear, Glycerine has also been found serviceable; it has been applied to burns, mixed with poultices to keep them moist; and even administered in some cases of dysentery, both as a medicine and enema; the former being 12 drachms of Glycerine in six ounces of Orange Flower and Plain Water, equal parts; dose 2 table-spoonsful every hour; and the latter, Glycerine 1 ounce added to 5 ounces of Decoction of Bran, or Linseed, to be thrown up twice a day. If this article is pure it has scarcely any perceptible smell, and only a sweet mawkish taste; it can be obtained best at Price's Candle Works, London.

GLYCINE is an earth first discovered in analyzing beryl; it unites with acids to form salts.

GLYCYRRHIZA RADIX (Greek *glykos* sweet, and *riza* a root). The root of the *Glycyrrhiza Galbia*, called by the Greeks *Adipson* (from *a not*, and *dipsa*, thirst) from its supposed property of quenching thirst; (see *Liquorice*), the saccharine matter or juice of which is termed *Glycyrrhizine*.

GOAT'S RUE, or False Indigo. A kind of leguminous plant belonging to the genus *Galega*, which is said to possess sudorific qualities, and to be an antidote to certain poisons, but we have no authentic records of cases in which it has proved successful.

GODFREY'S CORDIAL. This is the common "sleeping stuff" which the poorer classes give to their children to keep them quiet, while the parents are out working or taking their pleasure: its extensive and indiscriminate use is the cause of much mischief; the objections which we have urged against Dalby's Carminative apply with much greater force to this compound. "Godfrey's" is prepared in various ways, but the following formula will pretty fairly represent what are its general constituent principles:—Boil in 8 gallons of Water 1 pound each of Caraway, Coriander, and Aniseeds, with 2 ounces of Ginger; while hot, mix 14 pounds of Treacle; and when a little cool, 2 pints of Laudanum, in which 2 ounces of Oil of Sassafras has been previously put. Let the whole stand, frequently shaking, for two or three weeks, then strain and make up to 8 gallons with Water. Were it not for the quantity of Opium which it contains, this would be a very good carminative; and as it is, may be a serviceable medicine properly and discreetly used.

GOITRE, or GOTRE (probably a corruption of *guttur*, the throat). The name given in

Switzerland to that enlargement of the thoroid gland, causing frightful swelling of the throat, which we call *Bronchocele*, or *Derbyshire Neck*, on account of its prevalence in the hilly parts of Derbyshire and some neighbouring counties. In the alpine districts of Europe, where it chiefly occurs, Goitre is frequently associated with *Cretinism*, a form of mental imbecility. In the warm, moist valleys lying between the elevated tracts it prevails most, being there undoubtedly endemic, produced by the action of some unknown agent upon the system; the malaria common to such places is probably a predisposing cause. Of the real cause of the disease but little appears certainly known; it more commonly affects women than men, and those of a lymphatic temperament. It is not of an inflammatory or malignant character, and the swelling which it causes is rather a deformity than an inconvenience, otherwise, there being seldom any pain or discolouration of the skin; occasionally, however, the tumour becomes so large as to cause serious mischief, by obstructing the voice, and respiration. In this country it seldom attains a very considerable size, although we have seen cases in which it was large enough to be extremely frightful and inconvenient, causing impeded respiration and apoplectic symptoms, arising from obstructions in the circulation of the vessels of the neck and head. As a rule, Goitre seldom attacks any below the age of puberty, but in countries where it most prevails children are sometimes affected by it, even from earliest infancy. Among the most probable causes assigned for it is drinking water impregnated with lime and magnesia. Its most successful remedy, by far, is Iodine, which those affected by it took in the form of Burnt Sponge, long before the existence of such a principle in marine productions was known. In this country, we commonly prescribe for it Iodine Ointment, to be rubbed into the tumour, or Tincture of Iodine, to be painted over it every night, intermitting the application when the skin becomes sore. We also give a mixture of Infusion of Gentian 1 ounce, with Iodide of Potassium 2 grains, with perhaps 10 drops of Compound Tincture of Iodine, twice a day, upon a full stomach. If taken in time, the swelling will generally yield to these means; but, if it be of long standing, large size, and at all indurated, it is very difficult of removal. In some of the places where the disease is endemic, a superstition prevails to the effect that a cure will be effected if the hand of a

dead bachelor is rubbed over the tumour. We merely mention, but do not recommend, this mode of treatment, having faith rather in Iodine (which see).

GOLDEN OINTMENT. Commonly known as "Singleton's Eye Salve," is a compound of the Sulphuret of Arsenic (called Yellow Orpiment) and Spermaceti Ointment. It is a good application for the lids of inflamed and sore eyes, but not so good as the Ointment of Nitrate of Mercury, often termed Citron Ointment, which in appearance it closely resembles.

GOMPHOSIS (Greek *gomphos*, a peg). An articulation of bones which resembles the setting of a nail in a piece of wood, or the teeth in their sockets.

GONORRHOEA (Greek *gone*, semen, and *reo*, to flow). This term means literally involuntary emission of semen; but it is always applied to a discharge of purulent matter from the urethra or vagina. The common English term for the disease is *Clap*, derived from the old French word *Clapises* (places kept and inhabited by prostitutes); it is now commonly called in France a *Chaudepiesse*, from the heat and scalding in micturation: in Germany they term it a *Tripper*, that is, a dripping. Gonorrhœa may be shortly described as a morbid discharge from the urethra, in consequence of impure connection; it is, as Abernethy observes, "a mere local disease, not followed by any constitutional symptoms." Nay, it is decided to be a separate disease from the old *Lues*, or venereal disease, of which it has long been considered a modification. In this case the gonorrhœal poison falling upon a mucous surface produces from thence a discharge of infectious matter; in the other, the syphilitic poison applied to the skin, or, as it is believed, to any surface, produces ulceration and inflammation, forming a sore called *Chancre* (which see), the discharge from which, being received into the absorbent glands, occasions *Bubo* (which see), and being carried into the circulation, produces inflammation and ulceration in the throat, in the skin, the periosteum and the bones. (See *Syphilis*).

Symptoms.—Shortly after the infection has been communicated (it may be two or three days, or a week, or more), the patient experiences a sensation of heat, with tingling and uneasiness about the orifice of the urethra; this is quickly followed by swelling and redness about the margin of the opening, and a slight mucous discharge; then there is pain, and what is called *ardor urinae*, or scalding of the water, and diffi-

culty of passing, in consequence of the passage being clogged with mucus, which comes away with the urine in flocculi or threads. As the passage diminishes, in consequence of the swelling of the urethra, so does the stream, which is often divided into two or three, and attended with excessive pain; the discharge assumes a purulent appearance, and becomes yellow, with bloody streaks intermixed. By the colour and appearance of this matter, a judgement may be formed of the degree of inflammation in the urethra, down to the bulb of which it sometimes extends, although it is not attended with ulceration, except it may be in the *lacunæ*, or excretory ducts. It should be observed, that although the discharge has a purulent appearance, yet microscopic examination shows it to be chiefly mucous. It has been said, that Gonorrhœa will wear itself out; but the cure must not be left to nature, or it will probably wear out the patient first. Sir A. Cooper says he has "known it to continue for months, and continue to be infectious during all that time. It sometimes continues for so long a time, notwithstanding all the means which may be employed for its cure, as to be an opprobrium to our art." The same eminent authority continues—"There is no comparison as to the difficulty of getting rid of Syphilis and Gonorrhœa; Syphilis is a disease which a child might generally cure; Gonorrhœa is a disease which very often baffles the longest experience, and the greatest professional skill."

Both internally and externally the gonorrhœal inflammation often extends beyond its original seat; the glands of the groin become sympathetically affected—enlarged and painful;—this is nearly always the case with a first attack of Clap, which is more difficult to cure than any which may succeed it: unlike syphilis, in which but one gland on each side is affected, and in which there is generally suppuration, the several glands are all affected at once, and abscesses very rarely occur. The painful state of the parts termed *Chordee*, in which the penis is curved, or turned on one side, so as to prevent complete extension, is caused by the spreading of the inflammation to the *corpora spongiosa*. The next unpleasant effect of the disease is *Stricture* of the urethra (which see), and with, or close upon this, we often find an inflamed state of the muscles causing great irritation and spasmodic contraction. Sometimes the inflammation extends itself to the *vasa deferentia*, the excretory ducts of the testicles, and produces a swelling erroneously called *hernia humoralis*, from

thence it spreads to the prostrate part of the urethra, causing great irritation in the neck of the bladder, so that the patient is under the necessity of pressing on the perineum when he makes water; and when matters have reached this pass, there is commonly swelling of the testicles.

Treatment. This is Sir A. Cooper's plan. In first Clap, begin with purgatives, Calomel and Colocynth pills—enough to act freely on the bowels, and liver, if necessary, but not to affect the system, this is not required in Gonorrhœa—with Salts and Senna, say 1 ounce of the former in 6 ounces of Infusion of the latter, a couple of table-spoonful two or three times a day: after this, 2 drachms of Carbonate of Potash, or Sesqui-Carbonate of Soda, in a quart of some diluent drink (thin Mucilage of Acacia, with a little Lime Water, is perhaps the best to be taken), in the course of 24 hours. Soda-water is good, if it does not produce irritability of the bladder, resulting in a more frequent desire to void urine.

If the penis is suffered to hang for a considerable time in warm water, it will relieve the inflammation, and answer the same purpose as a warm bath. When *ardor urinæ* comes on, or the pain from chordee is severe, give the following mixture:—Extract of Conium, 1 scruple, rub down in 6 ounces of Camphor Mixture, and add 2 drachms of Liquor of Potash; take two table-spoonful two or three times a-day. Pursue this plan for about a week, and then begin to apply to the mouth of the urethra a piece of lint dipped in Goulard Water; treat as for four days longer, after which, if the inflammation has greatly subsided, give this mixture:—Balsam of Copaiba and Mucilage of Acacia, of each 1 ounce, shake up well and add Camphor Mixture, 4 ounces: a table-spoonful morning and evening. When this mixture has been given a couple of days or so, and the discharge has considerably diminished, recourse may be had to an Injection composed of the Liquor of Diacetate of Lead diluted, with 6 grains of Sulphate of Zinc to 4 ounces; continue this and the Balsam until a cure is effected: should this not be speedy, it is better to vary the injection; try 6 grains of Sulphate of Copper in 12 ounces of Rose Water, or 1 grain of Bichloride of Mercury in 12 ounces of Distilled Water; the latter is rather an irritating injection, and should be the last tried.

In any attack of Clap, after the first, the Balsam may be at once given, and the Injection commenced at the end of the first week. Should the Gonorrhœal patient con-

tinue long uncured, bougies with injections had better be tried, they will increase the discharge at first, but will no doubt eventually effect a cure. Another means of curing Gonorrhœa, is to produce a change in the action of the urethra, by the employment of Cubebs, "which appears" says Sir A. Cooper, who greatly extols this remedy, "to produce a specific inflammation of its own, which has the effect of superseding the gonorrhœal inflammation." This Indian spice has of late been much employed in the treatment of the above disease, and with manifest advantage; it does not do to administer it at once in a first attack, where the inflammatory symptoms run high, especially if the patient be young and irritable; but after a week or ten days, or when the inflammation has somewhat subsided, it may be given, if by itself, in doses of from 1 to 2 drachms three times a day; it is best taken in milk. The following is a formula given by Sir A. Cooper for its combination with Balsam of Copaiba.—Cubebs 2 drachms, Balsam and Mucilage of Acacia, of each, 1 ounce, Camphor Mixture 4 ounces; take two table spoonfuls three times a day. Lawrence, in his lectures, says:—"Cubebs given at the commencement of the complaint will very frequently bring it to an end in a few days; and, in other cases, where it will not arrest the discharge, it will ease the pain. The longer the complaint has existed before the remedy is used, the less likely are you to put a stop to it by the employment of the pepper." Abernethy recommends that the treatment of Gonorrhœa shall consist chiefly of diluent drinks, gentle aperients, rest, low diet, warm baths, and frequent sponging of the parts. Do this—set the digestive organs right, and the running will stop of itself, when its proper time comes: much mischief, he thinks, is often done by the use of injections, bougies, &c., and so, undoubtedly, there is; but, much good also, when judiciously employed.

When Gonorrhœa is neglected, a confirmed Gleet is often the result, which is very difficult of cure, the discharge being intermittent, sometimes profuse, and at others, but a few drops now and then in straining at a costive motion or the like: there is some doubt as to whether this chronic gleety discharge is infectious; Sir A. Cooper holds that, if from a stricture, it is not, but if from an abscess in one of the *lacunæ* it is. There is generally little or no colour in it, but sometimes it becomes yellow, and under the effect of much excitement green, and even bloody; it may be rendered so, and purulent, by excesses of

any kind. The medical treatment consists in the exhibition of the following medicines:—Sweet Spirits of Nitre 2 drachms, Balsam of Copaiba 1 drachm, Mucilage of Acacia 1 ounce, Camphor Mixture sufficient to make 6 ounces; take a table spoonful two or three times a day; if this fails, let the following pills be taken:—Powder of Spanish Flies 3 grains, Chio Turpentine 1 drachm; mix and divide into 12 pills, take 1 three times a day. The local treatment consists in the use of bougies and injections; the best formula for the latter is Bichloride of Mercury $\frac{1}{2}$ a grain, Distilled Water 6 ounces; after a time the strength may be doubled, but stronger than this it should not be used; if it does not succeed, a solution of Ammoniated Copper, or Sulphate of Copper, may be tried. Sea Bathing, rest and tranquillity, a tolerably generous diet, are among the most important remedial measures. Gleety discharge sometimes proceeds from a serofulous or relaxed state of the system, and, in this case, Bark, Steel, and other tonics should be administered.

Female Gonorrhœa and *Gleet*, are not so decidedly affected by the specific medicines Copaiba or Cubebs, as they are in the opposite sex; a free use of diluents, and such lotions as the Diacetate of Lead to appease the local inflammation, will generally prove successful, if persevered in, and accompanied by rest, and gentle aperients; a sponge dipped in the lotion should be allowed to remain in the vagina, frequently cleansing and changing it. Female children, from a very early age up to that of puberty, have sometimes a purulent discharge from the pubendum, which may be thought gonorrhœal by those ignorant of their liability to it. Unpleasant suspicions, and even accusations may, as they have done, arise out of this; but a surgeon can at once assure the parents that they are unfounded. The proper treatment in this case is the administration of Calomel and Rhubarb, combined with a little Jalap, and the application of Black-wash to the inflamed parts.

Gonorrhœal Rheumatism. This sometimes follows an attack of the disease; whether it is the result of absorption of the poison, or of the irritation produced by the inflammation of the urethra and adjoining parts, is not clearly known; for this, Turpentine must be administered in some form, either in that of Balsam of Copaiba, Gum Olibanum, or the pure Spirit itself; (for the rest, see *Rheumatism*.)

Gonorrhœal Ophthalmia is another form of the disease in which it attacks the eyes, and is very difficult to cure. The general treat-

ment recommended for Gonorrhœa should, in this case, be followed with such local applications as may be required. (See *Ophthalmia*.)

As it is of great importance that an injection should be applied so that it should come in contact with every part of the inflamed surface, we here append a few directions for its proper application. First take care that the syringe, be it of pewter or of glass (the latter is the best), works freely and easily with a slight pressure of the fingers. From $1\frac{1}{2}$ drachms to 2 drachms of the liquid is the quantity required at once, and when the instrument is charged with this, insert the point carefully to the extent of about half an inch within the lips of the urethra, which should be gently pressed together so as to prevent the reflux of the fluid, which should be felt distending the passage as far down as the membranous portion. When the syringe is emptied, withdraw the point, and keep the orifice of the urethra pressed together, as above directed, for two minutes or more; then withdraw the pressure, and the liquid will flow out, most likely with considerable force, in consequence of the elasticity of the canal, which it is advisable to clear by making water before using the injection; and this reminds us of a popular notion that mischief may be done by the injection reaching the bladder, but this is an idle fear with the charge which an ordinary syringe can convey. An injection should never be so strong as to cause much smarting or pain in the passage, only a sense of titillation; it is best to begin with it very weak, and gradually increase its strength: swelled testicles and sympathetic buboes are by some attributed to the use of astringent injections, but we have known these occur when no injections have been used.

GOOSE. The flesh of this well-known bird, a member of the genus *Anser*, is far too rich for weak stomachs, and all invalids should eschew it as a poison; but a strong, healthy person may take it in moderation, without the probability of any ill effects. It should be always roasted, as by this means some of the fat is got rid of.

GOOSEBERRY. The fruit of the *Ribes Grosularia*, which is too well known to need any description; it is wholesome in all its varieties, especially when perfectly ripe, and makes one of the most agreeable and useful of jams. We would not, however, recommend much of this to be taken, on account of the skins, which form a considerable proportion of it. Green Gooseberries in a pudding or pie are by no means unwholesome, if well sweetened; but the



ripe berries are best, and especially for persons of constipated habits, because they are slightly laxative. See *Fruit*.

GOOSE GREASE (Latin *Adeps Anserinus*). The fat of the Goose melted down and strained was formerly used as an emollient in *cnemati*, and also given as a mild emetic; it is now chiefly employed as a healing application for chapped hands, &c. See *Adeps*.

GORDIUS. The *Seta Equina*, or Horsehair Worm of the old writers. It was supposed that the peasantry of Lapland and some other countries, by drinking water in which this worm existed, acquired intestinal and cuticular diseases: the latter, in which the worm was said to be lodged under the skin, was the *Morbus pilaris* of Horst, and the *Malis à crinonibus* of Sauvages. See *Worms*.

GORGET. An instrument used for cutting the prostrate gland and neck of the bladder, in *Lithotomy* (which see).

GOULARD'S CERATE. The Compound Cerate of Lead, or the *Ceratum Plumbi Compositum* of the London Pharmacopœia; it is cooling, astringent, and deobstruent; a good application to burns, excoriations, and inflamed sores.

GOULARD'S EXTRACT. A saturated Solution of the Subacetate of Lead, the *Liquor Plumbi Diacetas* of the London Pharmacopœia; in old medical books it is frequently called Extract of Saturn. It is, externally, cooling, astringent, and discutient; diluted with 40 times its quantity of Distilled Water

it is a good application to burns and inflamed surfaces; still more diluted it makes a good collyrium. In either way it is commonly called Goulard Water. See *Collyrium*, *Lotions*.

GOULARD'S OINTMENT is prepared by melting together 4 ounces of White Wax and 9 ounces of Olive Oil, then stirring in, while hot, $1\frac{1}{2}$ ounces of Goulard's Extract, and 1 drachm of Powdered Camphor.

GOURDS. The edible Gourds may be considered as wholesome vegetables generally; the best are the Cheese Gourds and Vegetable Marrows. They are agreeable to the palate of most persons, when boiled, and served up with a little butter, but are more wholesome without the latter; nor do they require it, if taken with the gravy of roast meat: if eaten perfectly ripe, and the rind rejected, they are, perhaps, more easy of digestion than Cabbage, and thence are more suitable for invalids. See *Pumpkins*.

GOUT (Latin *gutta*, a drop, or defluxion). This is a disease of the blood, the exact nature of which does not appear to be clearly understood: all that we certainly know is, that the blood of a gouty person contains an excess of uric acid; and this excess is by some thought to be a cause, by others a consequence of the malady. The proper outlet for this acid is through the bladder, in the urine, where it may generally be found, in certain proportions; but in some peculiar conditions of the constitution the quantity is greatly increased, and then it constitutes the disease called *Gravel* (which see). This latter disease often alternates with Gout in the same person, or in different individuals of the same family—in this case the males being usually affected by Gout, and the females by Gravel. There is, perhaps, no disease in which hereditary tendency is so clearly established as in this. A gouty father will, it is quite likely, have a gouty son or grandson, although it will sometimes intermit for two or three generations. Persons of full habit are most likely to be attacked by Gout, the premonitory symptoms of which are dull pain in the side, headache, confined bowels, high-coloured urine, and sometimes scaly eruptions on the skin. The attack itself commonly comes on in the night: the sleeper probably goes to bed with a sort of undefined dread; his slumber is uneasy, and disturbed by dreams, which are suggestive of some great peril or suffering; he is awakened to the reality of the latter by a sharp twinge in the foot, most likely in the ball of the great toe. Watson, in his "Lectures," quotes, from a French author, this quaint

and forcible description of the severe pain:—"Place your joint in a vice, and screw the vice up until you can endure it no longer—this may represent rheumatism; then give the instrument another twist, and you will obtain a notion of Gout." The pain is, indeed, most excruciating, and those who have once experienced it, dread its recurrence, which, however, seems inevitable at periods more or less distant. Within twenty-four hours after the commencement of the attack, the part—which feels as if it had been crushed, burnt, or dreadfully lacerated, so that it shrinks from the slightest touch, even of the bed-clothes—begins to swell, becomes red, and is covered with moisture; then, it is likely that the patient, relieved somewhat of his pain, falls asleep, and gets into a gentle perspiration. He awakes refreshed, but the foot is extremely tender, and, if he is able to walk on it, there is a constant dread of its being touched. For some days and nights the paroxysms continue to come on, although with less severity than at first; then the swelling abates, and the skin, which has become very red and shiny, peels off with a troublesome itching, the foot resumes its usual appearance, and the patient feels as well, or even better than ever. So commonly is this latter the case, as to give rise to an erroneous impression that an attack of Gout improves the health, rather than otherwise, and hence the indulgences which tend to bring it on are oftentimes not avoided, as they would otherwise be. Sometimes months, and sometimes years will elapse before another visitation of this troublesome disease occurs. The succeeding attacks will probably be less severe than the first, but there will be more constitutional derangement, and the intervals between them will become shorter and shorter, until at length the patient is scarcely free from the disease, except, perhaps, during the summer months. Both feet will become affected, either alternately or together, and eventually almost every joint of the body, around which chalky concretions are formed, rendering them weak and inflexible. Watson says that "The material of these curious concretions (called chalk stones) is deposited at first in a half fluid state, and resembles soft mortar; but the more watery ingredients being afterwards absorbed, it becomes dry and hard." It is related, in a medical communication, of a gouty individual, "that he was accustomed, when playing at cards, to chalk and score the games upon the table with his gouty knuckles." When these depositions do not confine themselves to the joints, they often

appear in various parts of the body as bumps or tumours, which cause transient local inflammations, and run their course in a few hours, being accompanied by shooting pains, and a disposition to grind the teeth. Graves, in his clinical lectures, says that "these seem to be the result of momentary congestions." When Gout attacks the stomach it is very dangerous; its symptoms in this case are great pain, nausea, vomiting, and eructations and flatulency; there are also violent cramps of the organ, and of the limbs, with great depression of spirits, at times diarrhœa, but more frequently obstinate constipation.

When Gout affects the chest, there is palpitation of the heart, with difficulty of breathing, and a countenance indicative of distress. When the head is the seat of disorder, there is giddiness, with pain and apoplectic symptoms. When the spine is affected, severe neuralgic pains, with affections of the kidneys and, subsequently, perhaps palsy.

When, commencing with a joint in the ordinary way, it suddenly leaves that part before reaching its maximum of intensity, and attacks some internal organ, we have what is called Retrocedent Gout. "It occasionally in this way," says Watson, "attacks the urethra, simulating gonorrhœa, at other times the eye, the testicle, and now and then, to a dangerous extent, the throat."

Foremost, among the *causes* of Gout, stands hereditary predisposition; next to this is luxurious living, large quantities of animal food, rich sauces and wines, with little bodily exercise; or there may be much of this with copious perspirations, and a great consumption of porter. Stalwart burly coal-heavers and brewers' labourers, are sometimes gouty; and so are thin spare men of sedentary habits, who are subject to indigestion and constipated bowels; it is sometimes brought on by great anxiety of mind or mental toil, great bodily fatigue, sensual indulgences, or suppression of customary discharges, such as piles, to which gouty persons are very liable.

Gout more commonly attacks males than females, and most frequently those between the ages of thirty and forty years, although in some, who have it by inheritance, the predisposition is so strong that it shows itself at a much earlier age.

Gout and Rheumatism, in some points, resemble each other, but the former may be distinguished from the latter by its generally attacking but one joint at the time, and by its being usually confined to the smaller

joints; by its previous or accompanying indigestion, and by the absence of the sour perspiration, that being a characteristic of *Rheumatism* (which see).

Buchan says, that "excess and idleness are the true sources from which it originally sprung, and all who would avoid it must be active and temperate." A strictly abstemious diet, therefore, is advisable for those who are, from hereditary or other causes, predisposed to Gout. Malt liquor by such should never be taken; Wine, if at all, very moderately; strong Coffee should be avoided, and highly seasoned Meats and stimulating drinks. Milk or Oatmeal Porridge for breakfast; meat once a day only, for dinner, with fresh vegetables and bread; rice or sago puddings; no pie crust should be allowed. A little spirits and water may not do harm, but then again it may; therefore it had better not be taken. Early hours, sponging, or the shower bath, with plenty of friction; regular and moderate exercise; these are the best preventive means. We never see agricultural labourers gouty, and Dr. Watson has well observed.—"Let the son of a rich and gouty nobleman change places with the son of a farm servant, and earn his temperate meal by the early sweat of his brow, and the chances of his having a fit of the gout will be very small."

Treatment. As this disease is of an inflammatory nature, it requires active antiphlogistic treatment: bleeding was formerly much resorted to, but is not often practised now; Saline purgatives, with Mercurials, and a spare diet, being generally sufficient. From 3 to 5 grains of Calomel, followed by a Black draught, to be repeated every four hours or so, until the bowels are freely opened, should be first given; after that a Saline Mixture with Colchicum, which last is the grand specific in Gout, frequently effecting a cure in a manner almost marvellous, although how it acts is by no means clear. Watson says that "it sensibly modifies the condition of the urine, rendering it less acid, and even alkaline, and increasing its quantity." He presumes that "these effects are produced by certain changes wrought in the blood by this substance, which thus and there proves, *somehow*, an antidote for the poison of gout." This remedy should, however, be judiciously employed, and always, if possible, under medical direction. (See *Colchicum*.)

The following combination may be recommended for the administration of this remedy:—Take of Wine of Colchicum 1 drachm, Bicarbonate of Potash $\frac{1}{2}$ a drachm, Simple Syrup 2 drachms, Solution of Ace-

tate of Ammonia 2 ounces, Peppermint Water, sufficient for an 8 ounce mixture. Dose, 2 tablespoonsful every 4 hours.

In the treatment of this disease, care should be taken that all the excretory organs are in proper operation; as the imperfect action of one or other of these will frequently render all curative efforts useless, and keep up the morbid condition of the blood, from which the disease proceeds, and which is the result of faulty assimilation. Thus, when there are gouty symptoms, unattended by fever, it has been found that Bark and Hydrochlorate of Ammonia, which have the effect of promoting an increased flow of all the secretions, acted most beneficially. So, too, when the system is low and deficient in vital energy, it is necessary to administer tonics, such as Bark, Quinine, Sarsaparilla, or some preparation of Steel, with, perhaps, Cod-liver Oil, before resorting to Colchicum or Guaiacum, which appear to exert a specific influence on Gout.

Sometimes what are taken for gouty pains are merely those of neuralgia, and, in this case, much mischief may be done by the incautious use of Mercury and Colchicum. Sometimes the pains and swellings of a gonorrhœal taint so closely simulate those of this disease, that it is difficult to make a distinction. Hence, we see, how necessary it is, that the skill and experience of the medical practitioner should be brought to bear upon cases of this kind. This, however, is not always to be obtained, and when it cannot the foregoing and following simple directions may be useful.

We will suppose then, that the Calomel and Saline Purgatives have been duly administered, and have had their full effect, and that the Colchicum Mixture has been likewise given, with, if the nights are restless, a 10 grain Dover's Powder at bed time, combining with it 2 or 3 grains of Calomel, if the motions are dark and offensive. If there is much thirst, effervescing draughts composed of Bicarbonate of Potash 1 scruple, Citric Acid 15 grains, with a little Syrup of Ginger, may be given occasionally; 15 grains of Carbonate of Magnesia added to each draught, will render its operation more effective, if not disagreeable to the patient. The action of the bowels must be kept up by a draught composed of Infusion of Senna with Decoction of Aloes, of each $\frac{1}{2}$ an ounce, if required; there should be a copious motion at least once a day. Very commonly the local inflammation will subside with the constitutional symptoms; but, whether it does so or not, considerable relief may be afforded by the application of Spirit Lotions combined

with an anodyne in some such form as this: Spirits of Wine 2 ounces, Tincture of Opium 2 drachms, Water 10 ounces; rags wet with this, to be kept constantly applied, or the foot to be covered with Cotton, Wool, or Wadding, and over the whole put Oiled Silk.

As to diet: give light broths, farinaceous puddings, plenty of mild diluents, with effervescing draughts, and a teaspoonful of Brandy; or, $\frac{1}{2}$ a drachm of Aromatic Spirit of Ammonia, for the more feeble patients.

Dr. Belli states in the *Gazzetta Medica di Toscana* "that he has for many years succeeded in curing Gout in the following manner. He gives for two or three days every fortnight, at the first symptoms of a fit, a purgative compound of from 8 to 10 drachms of Epsom Salts, 24 grains of Nitrate of Potash, and about $1\frac{1}{2}$ grains of Sulphate of Iron; the whole dissolved in $1\frac{1}{2}$ pints of Water: with weak subjects the purgative is given only every other day. The fourth part of the whole solution is given every successive half hour, with a few cups of light Broth, or an infusion of *Althæa Officinalis* (Mallow), or Camomile Tea. An excellent adjunct to this method is the juice of the wild Chicory, of which 3 ounces should be taken every morning, fasting, during the greater part of the year, or the whole twelve months. A Decoction of the root of the same plant may be substituted, and either should be sweetened with an ounce of Wild Strawberry Syrup.

When the local disorder does not yield to the general treatment, but continues to exhibit aggravated symptoms, recourse must be had to leeches, of which a dozen or two may be applied, and after them if the swelling be indolent, a blister, or friction with stimulating and anodyne Linament like this:—Soap Linament 1 ounce, rubbed down with Extract of Aconite $\frac{1}{2}$ a drachm, and then added to Spirits of Turpentine 1 ounce; dry friction should also be employed—rubbing with the palm of the hand and Hair Powder. When there is no longer inflammation of the parts, the limb should be exercised, at first very gently, to restore the circulation and prevent morbid deposits. When the decreased action has continued for some time and these deposits have taken place, so as to produce structural changes, the restoration, if it takes place, will be very slow and gradual; a perseverance in the course above recommended will be the most likely method of effecting a partial, if not a complete cure.

If the constitution of the patient be much broken and debilitated, a very active course

of treatment must not be attempted, and a cure is almost out of the question; a mitigation of the patient's sufferings is all that can be effected in such a case; there must be no great reduction in the diet, only avoid stimulants and indigestible food; if aperients are given, they should be of a warm and cordial character such as this:—1 drachm each of Magnesia and Rhubarb, 20 minims of Wine of Colchicum, 40 of Aromatic Spirit of Ammonia, Water, 6 ounces; take a fourth part twice a day. Or, if the aperient be saline, let it be accompanied by Spirits of Ammonia and Peppermint Water; wrap the affected part in warm moist flannel; take perfect rest of body and mind if possible.

When the Gout is retrocedent, which is sometimes caused by active local treatment, accompanied by the application of cold lotions, (those for this disease should always be used with the chill off), and which is evidenced by pain, and other signs of disorder in the stomach, the above draughts may be given, with 10 drops Laudanum, added to each dose; should faintness accompany the attack, as is often the case, a little Brandy may be administered, provided there is no tenderness at the pit of the stomach indicative of inflammation; the feet also should be immersed in a mustard bath, or have a mustard plaster applied to them.

It is maintained by some that Gout, Rheumatic Gout, and Rheumatism, are but three forms of the same disease; but it appears they are referable to different kinds of mal-assimilation, and the consequent formation of different poisons in the blood, the absence or presence in which of the uric or lithic acid has been taken as a distinctive mark of the disease: thus in true Gout we find it plentifully, in Rheumatic Gout little or none, and none at all in simple *Rheumatism* (which see). The more obvious distinctions, however, between Gout and Rheumatism are in the previous symptoms; in the seat of pain, and mode of attack; in the age of the patient; and in the presence or absence of the inflammatory fever, with which Gout nearly always commences. In this disease, too, there is more or less of dyspepsia, previous to, and at the time of commencement; the pain is more violent and paroxysmal, and, as we before observed, the larger joints are principally attacked by it.

Cullen enumerates four species of Gout—the Regular, the Atonic, the Misplaced, and the Retrocedent, with the peculiarities of which we need not trouble our readers; but may briefly say, in addition to the directions for treatment already given, that when it

attacks the head, so as to threaten apoplexy or palsy, a large blister should be applied to the back of the neck, small ones to the inside of the legs, and cataplasms to the soles of the feet; give Carbonate of Potash with Ether, and aromatics; and Tincture or Decoction of Aloes, as a purgative. When it attacks the lungs, and produces Asthma, apply blisters to the breast or back, stimulating cataplasms to the soles of the feet, and administer opiates and antispasmodics.

It has been observed that the painful paroxysms of Gout are short in proportion to their intensity; and thus the longer the intermission, the more effectual are they in removing various anomalous diseases to which the patient had been previously subject. Where there is youth, and an unimpaired constitution, we may hope to effect a cure; but the unfavourable prognostics are an impaired constitution, diseased viscera, hereditary predisposition, the deposition of calcareous matter in the joints, and the sudden retrocession of the disease from the extremities to some internal organ, as the brain, heart, lungs, or stomach.

We find what is called *Atonic*, or *Low Gout*, chiefly in those who have been long subject to the gouty diathesis, and whose strength has been much reduced by the Colchicum and other powerful medicines which, in the acute stages of the disease, they have been obliged to take. In this, although the local affection is nearly as painful and severe as in the inflammatory form, yet the paroxysms are unaccompanied by fever; in this, also, there is no chalk deposit, nor red sediment in the urine. The case should be considered one of congestion, simply, and treated as such. Where there is great weakness of the stomach, Mineral Waters, especially those of Bath, will be found beneficial; but, although formerly much resorted to by all gouty persons, they cannot be recommended to full habits and inflammatory states of the constitution.

None must expect to cure Gout in a hasty manner, with a little rubbing and a few doses of medicine. Hear what the old physician, Sydenham, says on this head:—“This is primarily and chiefly to be attended to—namely, that all stomachic and digestive remedies, whether they consist of a course of medicines, regimen, or exercise, are not to be entered upon in a heedless manner, but must be persisted in daily, and with great exactness. For since the cause in this and other chronic distempers is become habitual, and in a manner changed into ‘second nature’, it cannot reasonably be imagined that the cure can be accomplished

by some slight and momentary change made in the blood and juices by any kind of medicine or regimen; but the whole constitution is to be altered, and the body to be in a manner formed anew."

Gouty Concretions are the depositions formed in the joints of gouty persons, consisting of Urate of Soda and Phosphate of Lime. (See *Calculus*, *Chalk Stones*).

As the diseases proceeding from calcareous deposits in the bladder, or other tissues, appear to be peculiar to the human race, it has been thought by Wollaston and others that they might be ascribed to the cooked animal food, and fermented liquors, taken by man. If this theory is correct, both the vegetarian and temperance advocates have a strong argument in favour of their views.

GOWLAND'S LOTION. This is a Solution of Corrosive Sublimate in Emulsion of Bitter Almonds; it has the appearance of milk, and has long enjoyed a great reputation among *Cosmetics* (which see).

GRACILIS (Latin for slender). The name of a long thin muscle of the interior of the thigh; or, as we should say, of the internal femoral region.

GRAINS. These are the seeds of plants belonging to the order of grasses; we sometimes term them "cereals." From them the whole human family derive their chief nutriment, and they are, in their constituents, the nearest approach to animal food which can be found in the vegetable kingdom; in them the mineral elements of the soil, and the gases of the atmosphere, are so proportioned and combined, as to present to the digestive and assimilative organs the materials best fitted to support the bodily functions, and afford nourishment to the tissues. This nourishment, which the various grains afford to animal bodies, may be classed under three heads; in the first we find the azotized principle, adapted to build up and supply the waste of the muscular, or fibrous and albuminous tissues, (see *Gluten*); in the second we have the non-azotized principle, which supplies respiratory food, forms fat, &c. (see *Starch*); and in the third the mineral principle, consisting chiefly of phosphates of the alkalies and earths, which goes to form the bones, the nerves, and the tissues generally. Of course, the nutrient properties of the different kinds of grain depends greatly upon the quantity and proportion of each of their constituent principles. See *Barley*, *Maize*, *Millet*, *Oats*, *Rice*, *Rye*, *Wheat*, &c., which are the chief grains in use.

GRAINS OF PARADISE, or GUINEA GRAINS. The seeds of the *Anomum Granum Para-*

disæ, belonging to a genus of plants all of which bear aromatic seeds; among them are found *Cardamoms* and *Millagetic Pepper*



These grains are stimulant and aromatic, and have been given in large doses for ague; they are also used to give a false strength to Beer, Wine, and other liquors. See *Anomum*.

GRAINES D'AVIGNON. The fruit of the *Rhamnus Infectorius*, and other species of Buckthorn, commonly known as French Berries; they have aperient properties, but are not now much used. See *Buckthorn*.

GRANA MOLUCCA. An old name for the seeds of the *Croton Tiglii*, from which the drastic oil is extracted. See *Croton Oil*.

GRANATE CORTEX. (See *Pomegranate*.)

GRAND COUVRE-CHEF. A French surgical term, applied to a handkerchief used as a bandage. See *Bandages*.

GRANDINES (plural of the Latin *grando*, a hail stone). Applied by Wesser to enlarged *Tubercles* (which see).

GRANULATION (Latin *granum*, a grain). This term is applied to the process by which metallic substances are converted into grains or coarse powder. In surgery, which more nearly concerns us, the little grain-like pieces of flesh which form on the surfaces of ulcers and suppurating wounds, and serve

to fill them up, and so advance the healing process, are termed *Granulations*. This process is sometimes called *Granation*, or *Incarnation*. In weak and unhealthy states of the system, healing by Granulation does not proceed so rapidly as otherwise, and the sore remains depressed and smooth, with a shiny appearance; but sometimes the Granulations are excessive, and then we have what is called *Proud Flesh* (which see), also *Ulcers*, *Wounds*.

GRAPES. Most persons are fond of this delicious fruit, and there are few with whom it disagrees: to those suffering from the thirst attendant on fever it is most



grateful, and pleasant, and may be safely recommended, with the proviso that they swallow not the skins: it is better also to reject the stones, if many Grapes are taken: a few will do no harm. See *Fruit*.

GRAVEDO (Latin *gravis*, heavy). A cataract or cold, accompanied by a sense of heaviness in the head.

GRATIOLA OFFICINALIS (Latin *gratia*, gracious, or giving). The Hedge Hyssop, so called on account of the virtues formerly

ascribed to the plant, which belongs to the natural order *Labiatae*. See *Hyssop*.



GRAVEL (Latin *gravis*, heavy). Crystalline sediments deposited in the bladder from the urine; when amorphous, that is, shapeless, irregular, and reducible to powder, they may be either red or pink, consisting chiefly of Lithate of Ammonia; or white, into the composition of which the Phosphates largely enter. When crystallized, they may be also red, or white, the former consisting of crystals of Uric or Lithic Acid, and the latter of Triple Phosphate of Ammonia and Magnesia. Although the deposits in Gravel vary considerably in their form and colour, and to some extent in their character also; yet the nature of the disease is essentially the same. If the deposited particles remain stationary in the bladder for a length of time, others gather around them until they form a hard solid mass, which has to be broken down or crushed before it can be removed, and this constitutes the operation of *Lithotomy* (which see).

The symptoms of an attack of Gravel are constipated bowels, restlessness, and dry skin, with pains in the loins, commonly on

one side, where it descends, following the course of the urethra; the thigh and leg feel numbed; and sometimes in the male the testicles are drawn up. There is frequently sickness, and an urgent desire to make water, which is passed with difficulty, and is high-coloured and turbid, depositing a sandy powder, which is sometimes red, at others white, or a mixture or alternation of the two colours, with occasionally a bloody tinge. Derangement of the digestive organs is common in such a case; there will probably be constipated bowels, with acid eructations with great restlessness, and a sense of weight at the pit of the stomach.

Constitution Water is a remedy in the treatment of Uric acid gravel which has obtained some celebrity of late; it is sold at 5s. 2d. per bottle, of which an eighth part is directed to be taken four times a day; this quantity contains about 3 drachms of Carbonate of Potash, to the presence of which it owes its efficacy. It is recommended in all cases of stranguary, gravel, and stone; but, says Dr. Hassall, "the only cases to which it is really applicable, are those of Uric acid diathesis: in some forms of urinary deposit it would be productive of incalculable mischief."

GRAVE-YARDS. As a matter closely connected with sanitation, or the laws of health, it behoves us to say a few words upon this subject here. Until quite recently, the Graveyards of our populous towns and cities were a disgrace to a civilised community, and frequent sources of pestilence and death; over-crowded and closely surrounded by houses as they were, and, in too many cases, still are, it cannot be otherwise; the mass of decomposed animal matter lying in many instances so near to the surface, must give out noxious gases, which are breathed by those surrounding the locality, of course to the great detriment of their health. Graveyards should, in all cases, be removed a considerable distance from human habitations; a light sandy or chalky soil is best for them, and the corpses should be at least six feet below the surface; they should also be in an elevated spot, so that the winds may sweep over them and bear away all noxious effluvia.

GRECIAN WATER. A solution of Nitrate of Silver used for dyeing the hair black: exposure to the air soon turns it purple.

GREEN SICKNESS. The popular name for *Chlorosis* (which see). It has obtained this name from the pale and greenish cast of the skin of the patient; it is one of the forms of *Anæmia* (which see), and chiefly affects young girls, although adult and even mar-

ried women, and young delicate males are subject to it. In addition to the pallor of the skin, which is common to all the forms of *anæmia*, this has some peculiar symptoms, such as hysterical paroxysms, and extreme nervousness, pain in the side, swelling of the ankles, headache recurring at certain periods; there is also frequently depraved appetite, and a disinclination for wholesome food altogether. If the case is long neglected the symptoms become greatly exaggerated, the secretions are unhealthy in character and deficient in quantity; the limbs swell, the pains in the head and face are more severe, and so weak is the patient that every exertion, even the slightest, is laborious; the depraved appetite becomes more remarkable, cinders, chalk, slate pencil, and articles equally unfit for eating, are sought for, and masticated with avidity. The disease appears to arise from a defect in the blood of the red particles, and other solid constituents, and this is caused by defective assimilation; those young persons of sedentary habits, or who work in crowded factories, who live in underground kitchens, and the like, are particularly subject to it, especially domestic servants, and others, who change a life of open air activity in the country for one of close confinement in a town. Change of air, tonics, and the course of treatment prescribed under the head of *Anæmia*, is the best in such cases. Exercise, fresh air, and nourishing diet, are the grand restoratives. Iron is the best tonic, alone or in combination with Quinine; it should be given in the least nauseous form, and at least one hour before meals.

GREGORY'S POWDER. So called from Dr. Gregory who first used it, consists of Rhubarb, Calcined Magnesia, and Ginger, in the proportion of 2 parts of the first, 4 of the second, and 1 of the third. It is an excellent stomachic and mild aperient, and may be taken occasionally by both adults and children with great advantage; but it should not be taken often and regularly, as the quantity of magnesia will be likely to irritate the coats of the stomach, and bring on diarrhoea and dysentery. Gregory's Powder may be taken either in simple water, or with a few drops of Sal Volatile, which will increase its stimulant and tonic properties.

GREY LOTION. A preparation for irritable sores, consisting of Submuriate of Mercury and Lime Water.

GROATS. The decorticated seeds of the *Avena Sativa*. See *Gruel*, *Oats*.

GROCER'S ITCH. A variety of the disease known as *Eczema* (which see); it is dis-

tinguished by the generic term *impetiginodes*, and is produced by the irritation of sugar on the skin: frequent ablutions, with the use of mild saline aperients will prove the most effectual remedies; if there is much inflammation and itching, fomentation with warm gruel or milk, and warm bran poultices will be of service.

GROMWELL. The *Lithosperma Officinale*, a plant of the natural order *Boraginæ*, found in this country, and formerly much esteemed as a remedy in calculous disorders.



Two other species of the genus *Lithospermum* are indigenous to this country; the *L. Arvensis* or Bastard Alkanet being the most common; but neither of them have now any medical reputation.

GROSALINE (*grosalæ*, a goosberry). The name given by Guibourt to the peculiar principle extracted from gooseberry and other acid fruits, forming the basis of jelly.

GROUNDSEL. The botanical name of this common wayside plant is *Senecio Vulgaris*; it belongs to the natural order *Compositæ*, and the generic name of its tribe is derived from the Latin *senex*, age, on account of the silvery hair-like filaments with which the seeds are surrounded. Groundsel now chiefly used as a food for birds, was formerly much employed in cataplasms, from an idea that it was good for sickness of the stomach. A

weak Infusion of the plant is still sometimes given as a purgative, and a strong Infusion as an emetic; it is also chopped up and given to horses to free them from



botts, and the flowers are said to be cooling for song birds.

GROWTH. The act of growing or the state of being grown. The Growth of the human body depends upon its having first a proper amount of nervous excitement; which exercise only can give, and next a due supply of healthy blood, which depends partly on the food taken, the air breathed, and a right action of the digestive and assimilative organs. All these are absolutely necessary to the full development of the muscular and other tissues of the body; but especially exercise, without which there may be growth, but it will be of a morbid, unhealthy character. The man who earns his living by the sweat of his brow, and he who does nothing but sit at home and pamper his appetites, may be equally stout, and perhaps well-looking; they may both carry the same amount of animal matter, indeed the latter will, in all likelihood, bear more than the former; but if we compare the nature of the development, we shall find it very different: in one case it will be firm and compact, and in the other soft and diffuse, or, as is commonly said, flabby; there is too much adipose matter—fat; and the joints of the frame are not well knit. Some animals attain their Growth much more quickly than man, with whom the process continues generally up to the 20th year, and if it then appears to cease, it is not because new material is not constantly added to the old,

but that the supply and waste then becomes equalized, or nearly so. It has been calculated at the end of seven years a man has scarcely a particle of the same matter about him as constituted his frame and substance at the beginning of that period; in a perfect state of health, except as regards fatty deposits, which are not inconsistent with this state, he ought not to increase or diminish in bulk until old age comes on, that is after the 60th year; the supply of material will then begin to lessen, and a falling away is the consequence.

In the earlier periods of life, when Growth is most rapid, it is of vital importance that there should be plenty of exercise, and plenty of good wholesome food: the appetite of a growing child should not be stinted, neither should it be pampered; he is not likely to eat too much of that which is really nutritive and fit for him, and it is a very mistaken kindness to let him eat to repletion of that which is not so. See *Age, Appetite, Food*.

GRUEL. This well known article of invalid diet, is frequently so prepared as to be absolutely injurious, instead of, as it ought to be, wholesome and salutary; the old fashioned Embden Groats, or those called "Robinson's," which are simply oats deprived of their husks, and crushed, are the best materials for making Gruel for adults; they should be boiled slowly in water for two or three hours at least, to extract their nutritive principles. For children, the Prepared Groats are best, as they are ground very fine, and have probably a little wheaten flour mixed with the oatmeal, which corrects its laxative tendency: the best mode of preparation is to mix, say a teaspoonful of the Meal with a little Cold Water, in a basin, taking care to get it properly smooth and free from lumps; into this stir gradually a cupful of Boiling Water, pour the whole into the saucepan, and boil for a quarter of an hour, stirring the while, then strain if at all lumpy, and add half-a cupful of Milk; sweeten with Lump Sugar, and if agreeable, grate into it a very little Nutmeg. The coarse Scotch oatmeal, if well boiled, makes an admirable Gruel; some persons prefer to take Salt in it, and in this way it is perhaps better for weakly stomachs than sweetened. See *Diet, Invalids*.

GRUTUM. A name given by the French to the eruption called Millet Rash. See *Milium, Rashes*.

GRYLLUS VERRUCAVORUS. A kind of grasshopper, which in Sweden has the reputation of destroying warts, by biting off the

excrecence and discharging on the raw surface a corrosive liquid.

GUAIAECUM. The wood and gum resin of the *Lignum Vitæ*; a West Indian tree belonging to the natural order *Zygophyllaceæ*, and called by botanists *Guaiaecum Officinale*, are both used medicinally, for the cure of chronic cutaneous and syphilitic diseases, gout, and rheumatism. The Wood, which is very hard and close grained, is rasped small, and from it is prepared the Decoction of



Guaiacum; dose from 2 to 4 ounces; it is also one of the ingredients of the Compound Decoction of Sarsaparilla, and other diet drinks taken to purify the blood, and enters into the composition of the Compound Lime Water: an Extract is likewise made from it, of which the dose is from 10 to 30 grains. The Gum is given in Powder in 10 or 20 grain doses, often mixed with Magnesia or Milk of Sulphur: its other officinal preparations are Mixture of Guaiacum, dose from 1 to 3 table-spoonsful, 2 or 3 three times a day, and Simple and Compound or Ammoniated Tinctures, dose from 1 to 2 drachms. Those suffering from chronic gout and rheumatism, especially if of syphilitic origin, cannot do better than take Guaiacum Mixture and Plummer's Pill; the former prepared thus:—Powdered Gums, Guaiacum and Acacia, of each 1½ drachms;

Nitrate of Potash $\frac{1}{2}$ a drachm; **Tincture of Conium**, or **Hyoscyamus** 1 drachm, or **Tincture of Opium** $\frac{1}{2}$ a drachm; **Cinnamon Water** 6 ounces; mix and take 2 table-spoonsful three times a day, with one of the above named pills every night. If more agreeable to take it in the form of Powder, rub down 3 drachms of each of the Gums with 1 drachm of Nitrate of Potash, and 9 drachms of Compound Cinnamon Powder; take $\frac{1}{2}$ a drachm in a little Milk three times a day.

GUARANINE. A vegetable principle discovered in the fruit of the *Paulina Sorbilis*. It precipitates the aqueous solution of the Nitrate of Silver. We do not learn that it has been applied to any medical purposes.

GUBERNACULUM (Latin for the rudder of a ship). A name given by Hunter to the fibro-vascular substance between the testes and scrotum in the fœtus, because he considered it the principal agent in directing the course of the testes in its descent. See *Testes*.

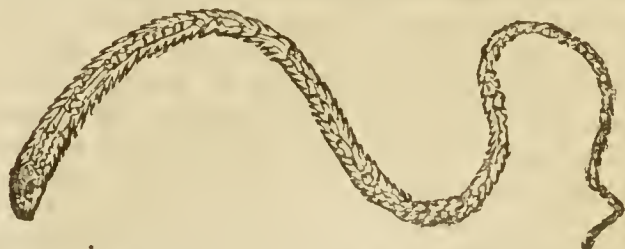
GUIDO'S BALSAM. This was, at one time, a favourite remedy for rheumatic and neuralgic pains; its composition is supposed to have been much the same as the present Soap Linament, with a little Laudanum.

GUINEA HEN WEED. A vulgar name for *Peteveria Alliacea*, an acrid tropical plant



used in Jamaica to increase the flow of the saliva.

GUINEA WORM. A small round worm, with a black head and a white body, not unlike the string of a violin, which is found beneath the skin, between the muscles and cellular membrane of negroes, and others, who have been for a time in tropical climates, particularly on the West coast of Africa; the feet and calves of the legs are the parts into which this parasite chiefly penetrates, and the *symptoms* of its presence are, first itching and irritation of the part, in which, on close inspection, you will generally discover a small blister. The pain, at first, is not acute, but gradually there arises an angry swelling like a boil, and there is much heat and tenderness of the part, with, however, but little disposition to suppuration. This goes on for some time, and then a little black spot, the head of the worm, shows itself in the centre of the swelling. As soon as this is sufficiently protruded it must be taken hold of very gently, and an effort made to draw it out, which effort must be renewed every now and then, care being taken not to pull so forcibly as to break the body of the worm, as, if any part is left in, it is likely to cause a troublesome ulcer. The best plan is to affix the head to a piece of cotton rolled up in the form of a quill, and taking the two ends of this between the fingers and thumbs turn it gently round. The animal varies in length from 5 or 6 inches to as many feet, so that the winding operation is sometimes a tedious one; but patience and perseverance in this, as in most cases, will generally overcome the difficulties. When the whole of the



worm is extracted, the wound should be dressed with some kind of healing Ointment, or if it is much inflamed, a simple Water Dressing will for a time be best. Should the worm break, and the part become ulcerated in consequence, it must be poulticed and treated like a common *Ulcer* (which see).

The *Chigre*, or Sand Fly of the West Indies, is another of these troublesome parasites, which abound in hot climates. Like the Guinea worm, it insinuates itself into the soft and tender parts, generally, however, attacking the fingers and toes. It produces similar effects to those just described, but presents no available part for

the operator to lay hold of; it, therefore, has to be cut out, and this should be done as early as possible. Some of the negro doctors are very dexterous in extracting this fly, which if suffered to remain will cause deep ulceration of the tissues, and, perhaps, will render amputation necessary. After the extraction of the several bags, which these flies form, the wounds are washed with a strong infusion of Tobacco, or a solution of Sulphate of Copper and the wound is covered with a Tar plaister.

GULLET. The tube which extends from the throat, or fauces, to the stomach, termed by surgeons the *Œsophagus* (which see); it forms the upper portion of the *Alimentary Canal* (which see), and through it, of course, all the food taken must pass, being propelled downward by the action of the muscular fibres, which form one of its coats. It is narrowest at the top—and here, if any where, a morsel of food, or other object too large for the passage, would stick fast, an occurrence which is sometimes attended with serious consequences. Persons, when eating, should have this in mind, and masticate their food well before attempting to swallow; they should also remember, that the food does not simply fall through an opening prepared for it, but is, as it were, taken and passed downward from circle to circle of the muscular rings, which not only open to receive it, but close behind to push it further down; and thus an attempt to swallow food too quickly will interfere with this action, causing a spasmodic pain and a sensation of choking. When a piece of food too large for the passage sticks fast in the Gullet, and cannot be removed, death from suffocation will be likely to ensue. Sometimes the obstruction can be pushed down into the wider part of the passage by means of a finger passed into the opening of the Gullet; or, if it cannot, this may be accomplished by means of what is called a *Probang*, which is a smooth, round piece of whalebone, about 2 feet long, and as thick as a wheaten straw, to the smallest end of which a piece of sponge about the size and

oiled or greased in some way, and pushed steadily and quickly down until the obstruction is felt to give way. If this should be a fish-bone or other jagged object, which is likely to penetrate the membrane, and get firmly fixed, the removal is not so easily effected. A little dexterous management of the fingers will often do this, as it is seldom far in the passage. In all such cases a surgeon should be summoned without delay, for an operation may be necessary. If the obstruction remain long, and be of the nature last mentioned, it may cause inflammation and swelling of the part. If the obstruction be small, such as a pin or a single spine of fish-bone, some crumb of bread well masticated will probably carry it down. When it is removed, there will commonly be a sensation as though the obstacle were still lodged in the throat, which keeps up the uneasiness in the patient's mind; but if still there, a distinct pricking may always be felt when the throat is pressed.

There is sometimes a spasmodic affection of the Gullet which renders the act of swallowing difficult, and induces a belief that something is lodged there; this may be attributed to spasm or hysteria, if it is not caused by the effort to swallow too quickly. A sense of choking and suffocation is sometimes the result of foreign bodies getting into and irritating the windpipe, which lies in front of the gullet. See *Lungs, Throat*.

GULPH WEED. A marine plant or plants, so called from the enormous quantity found floating about the Gulf of Florida; we have it also in considerable quantities on our own coasts. It is sometimes eaten raw as a salad, or pickled like samphire; it is slightly aperient, diuretic, and antiscorbutic. Large quantities of it are brought from Devonshire, and consumed as a luxury in London. Whether it consists of one or more species, it undoubtedly belongs to the genus of marine plants called *Lavers* (which see).

GUM (Latin *gummi*). A concrete vegetable substance which exudes from certain trees, and hardens on the surface; it is soluble in water, and insoluble in alcohol, and this distinguishes it from *Gum Resin*, which is so only in spirit. Many kinds both of Gum and Gum Resin are used medicinally, and spoken of in this work under the several heads of the plants from which they come. (See *Acacia*, &c.).

Gum is the common proximate principle of vegetables, or the primary form of vegetable textures: in its constituents it resembles starch and sugar, being 51 oxygen, 42 carbon, and 7 hydrogen. It is soluble,

shape of a marble is firmly attached. Something like this may be extemporized out of the whalebone rib of an umbrella, or a very thin cane, having a knob of some soft, yielding substance fastened to it. In using the instrument, care must be taken to have the patient's head thrown well back, and to let the chief pressure be upon the back of the throat; the instrument must be well

glutinous, and mucilaginous; heated it becomes charcoal, boiled in sulphuric acid water it forms sugar. Of Gum, there are several varieties, of which we need mention but three:—1st. Gum Arabic, which is the juice or sap of several species of *Acacia* (which see); it consists, according to Berzelius, of carbon, 42.68; oxygen, 50.95; hydrogen, 6.37: 2nd. Gum of Starch, which is the soluble substance of the fecula: 3rd. Common Gum, which exudes from the bark, and even the pericarp of fruit trees, as the Almond, Cherry, &c.

GUMS. These are the cellular and mucous membranes which cover the alveolar processes of the jaw before the growth of the teeth, the fangs of which they afterwards envelope. They are liable to congestion, inflammation, and ulceration, resulting in abscesses and other diseased conditions of the tissues, to which allusion is here necessary.

Sponginess or Scurvy of the Gums is sometimes caused by an accumulation of tartar about the teeth, which is owing to neglect of cleanliness, or it may be owing to an unhealthy state of the blood generally. In this disease, the Gums become soft and spongy, and bleed at the slightest touch; they are also extremely tender, and swell outwardly, receding from the teeth, which eventually are left unsupported and fall out, although they may exhibit no signs of *Caries*. (See *Teeth*).

If a scorbutic habit of body be the cause of this malady, the symptoms may be relieved by attention to the general health, and the course of treatment prescribed under the head of *Scurvy*: a lotion, composed as follows, should be applied with a soft tooth-brush, night and morning:—Solution of Chlorinated Soda 1 ounce, Tincture of Myrrh 6 drachms, Eau de Cologne 10 drachms, Water 5 ounces. The Tincture of Myrrh alone is a very good application, if it does not make the Gums smart too much, which it commonly does. Sometimes a morbid growth of the Gum extends downwards so as to cover the tooth, and intervene between it and the opposite one; the remedy for this is the lancet, with which, or a sharp pen-knife, the extra growth may be cut off without danger: a lotion, composed of Alum and Tincture of Myrrh, about 1 drachm of the former and 4 of the latter to $\frac{1}{2}$ a pint of Water, should be used after the excision, as a styptic.

Gum Boils are the result of inflammation. They are small abscesses, and contain matter which should be let out as soon as possible, by means of a sharp penknife or lancet; but it is useless to attempt the operation until

the boil is in a fit state, which may be known by the projection at the sides of the teeth, and the shiny distended appearance of the investing membrane: the process of ripening, as it is called, may be hastened by hot applications to the cheek next to the swelling; and, if the pain is excessive, a leech applied to the gum will probably afford relief; if there are febrile symptoms, cooling aperients should be given, and the patient treated as directed under the head of *Abscesses*.

Inflammation of the Gums often arises from the irritation caused by decayed teeth; the only remedy in this case is the removal of the offending matters; after that, apply leeches, and reduce the system by an antiphlogistic course of treatment, if necessary.

The *Gums of Children* often become much swollen and indurated when they are cutting teeth, and in this case, a judicious use of the lancet is almost sure to give relief, first by the loss of blood, and secondly by the assistance thus afforded to nature in a difficult operation. More on this head will be said when we come to speak of *Teething*, (which see).

The appearance of the Gums frequently affords valuable information in investigating the nature of diseases: thus, when swollen and spongy, they indicate scurvy; when there is a blue line along the edge, we may safely assume that lead has been imbibed into the system, either by drinking water passed through pipes of that metal, or by handling it in one or more of its forms and combinations, as painters are obliged to do; a pink line indicates pulmonary consumption; and when there is inflammation, with soreness and sponginess, accompanied by a deepening of the colour, and a fetid breath, we may generally set it down to mercurial salivation; when this is the case, a Wash made of 2 drachms of Muriatic Acid to a pint of Water, will be found efficacious. Of Astringent Washes, none perhaps will be used with better effect than that prepared of Tincture of Myrrh and Alum, prescribed above: a very good and cheap preparation is simply 1 drachm of Alum dissolved in a pint of Water: for foul ulcerous Gums, the Solution of Chloride of Soda, with Camphor Mixture, should be used.

GUMMA. Is the name given to a small tumour, from the resemblance of its contents to the gum.

GUM RASH. Is a species of *Strophulus* (which see), a disease peculiar to infants; it is the same as Red Gum, and has among its varieties Wildfire Rash, and White Gum.

These are all cutaneous diseases, including Rank Red Gum, and other affections well known to nurses and the mothers of families. See *Infancy*.

GUSTOLARY (Latin *gusto*, to taste). A name of the lingual nerve, which passes near to the palate, and is chiefly concerned in tasting: it is a branch of the inferior maxillary. See *Nerves*.

GUTTA (Latin for drop; plural *guttæ*). Hence we have several surgical and medical terms, such as *Gutta opaca*, applied to *Cataract* (which see); *G. serena*, a species of blindness, in which the eye remains clear and apparently unaffected, except that there is unusual dilation of the pupil, which do not contract on the approach of light or any object (See *Amaurosis*, *Eye*); *G. Rosacea*, Rosy Drop (See *Acne*). Then there are certain preparations, such as *G. Anodyna* (Anodyne Drop), a Solution of Morphine; *G. Nigra* (Black Drop), a composition of Opium, Nutmeg, and Saffron, boiled in Verjuice, sweetened with Sugar and fermented with Yeast; it is sometimes called Lancashire Drops; *Gutta Vita* (Latin for Drops of Life), is a nostrum formerly much in repute for various internal complaints; its exact composition is not known; but its chief properties appear to have been those of a strong alcoholic stimulant and cordial. There are other preparations having this prefix *Gutta*, which term, under its contractions *Gt.* or *Gtt.*, was formerly much more used in prescriptions than at present; *minim* is more correct, because more precise in the quantity.

GUTTA PERCHA, or PERTSHA. This valuable article is a Gum resin, the product of *Isonandra Gutta*, a tree belonging to the natural order *Sapotaceæ*, found in India, but more particularly in Sumatra and the neighbouring islands. This article has recently come into extensive use in medical and surgical practice; possessing the property of being easily moulded, when warm, to any required shape, it has been found a very useful adjunct to the repair of fractures, and various other injuries to which the human frame is subject. It is also waterproof, and, a sheeting prepared from it is now used in most hospitals and sick rooms, as a protection to bedding from the natural and other discharges of the patients.

GYMNASTICS (Greek *gymnaxo*, to exercise naked). Bathing, swimming, leaping, wrestling, and the rude sports of the arena generally, would come under the ancient meaning of this term; but we apply it in a more restricted sense to those exercises which are deemed conducive to health, by

developing the muscles, and promoting the action of the secretory and excretory organs. Gymnastics now form part of the training of our youth of both sexes, and it is well that it should be so; for, unless there is a proper development of the physical powers, the mental growth is likely to suffer. The gymnasium as well as the school must help to form the men and women of the coming generation, or we shall have a sickly and stunted race, both mental and bodily. See *Exercise*.

GYMNOSPERMÆ (Greek *gymnos*, naked, *sperma* seed). A botanical term applied to plants which have their seeds destitute of a pericarp. Its opposite is *Angiospermæ*.

GYPSUM (Greek *gypsos* chalk, from *geos* earth, and *opse* to bake). This is chalk in combination with sulphuric acid and water; when these latter, or a portion of them, are driven off by heat it falls into powder, and constitutes what we call Plaster of Paris, useful for modelling and taking casts of parts of the human frame, but not otherwise employed in connection with medicine and surgery.

GYRI (plural of the Latin *gyrus*, a circuit). Applied to the spiral cavities of the internal Ear (which see).

HABIT (Latin *habitus*). State or condition of the body: thus we say a man is of a full or plethoric habit. It also means the effect of a frequent repetition of the same act, or the manner of doing anything. We are all, more or less, creatures of Habit, and our thoughts and actions alike run as it were in grooves formed in early life, and becoming deeper and deeper as we advance in years, until it becomes almost impossible to get out of them. How important, then, is the formation of good Habits; bad ones are easily acquired, and they commonly have a most pernicious effect upon the bodily health, as well as upon the state of the mind. Habits of cleanliness, of regularity in exercise and diet, and all matters pertaining to the performance of the bodily functions, should be taught as soon as the child is old enough to have any independent action. Habits of control, too, over his passions and appetites are of equal importance; in order that the "use" which, the proverb tells us truly, "is second nature," may not be in reality an abuse of those physical and mental powers which the great Creator intended should be made subservient to our good and his glory.

Scarcely need we insist on the fact that Habits and occupations of life greatly affect the constitution, and modify the state of health, producing peculiar diseases, or curing and eradicating those which exist in

the frame. Habits of intemperance, both in eating and drinking, and of sensual indulgences of every kind, are daily producing the most fearful effects around us; and every mother, and other person who has the care of children, ought to know and feel the importance of training the child in the way it should go. This is a subject on which we might greatly dilate, but it belongs rather to the moralist than the physician; under the several heads of *Exercise*, *Health*, *Occupation*, and others, included in our volume, allusion is, however, made to it.

HÆMA (Greek *aima* or *aimatos*, blood). From this root come several medical terms, such as *Hæmatemesis*, a vomiting of blood caused by hæmorrhage in the stomach—this was called by old physicians *Vomitum cruentum*; *Hæmatin*, the colouring matter of logwood, whose scientific name is *Hæmatoxylon Campechianum*; *Hæmagogues*, expellers of blood, medicines which promote the catamenial and hæmorrhoidal discharges; *Hæmalopia*, or *Hæmalops*, blood-shot eye; *Hæmatocele*, a swelling of the scrotum or spermatic chord, caused by effusion of blood; *Hæmatodes*, bloody, as applied to a morbid or fungoid growth (see *Fungous Hæmatodes*, under the head *Fungoid*); *Hæmatology*, an account or history of the blood; *Hæmatoma*, a blood-like tumour; *Hæmatosine*, the colouring matter of the blood; *Hæmatosis*, the formation of the blood; *Hæmaturia*, the passing of blood in the urine; *Hæmophthalmus*, an effusion of blood into the chambers of the eye; *Hæmoptæ*, or *Hæmoptysis*, the spitting or expectoration of blood, sometimes called *Pneumorrhagia*; *Hæmorrhage*, the loss of blood; *Hæmorrhæa petechialis*, a term applied to the chronic form of purpura—it has also been called *Petechiæ sine febre*, and sometimes *Land Scurvy*; *Hæmorrhoidal*, a term applied to the sciatic nerve, and to the arteries of the rectum, because they often bleed; and *Hæmorrhoids*, literally a discharge of blood, but commonly applied to *Piles* (which see); *Hæmastaciæ*, stagnation of blood; and *Hæmastatics*, medicines which stop hæmorrhages (see *Styptics*). There is also a plant called *Hæmanthus*, or the Blood-flower, of the natural order *Amaryllidæ*, with the juice of whose bulbs the Hottentots are said to poison their arrows.

HÆMATEMESIS (Greek *aima*, blood; and *emio*, to vomit). For a full account of the causes, symptoms, and treatment of this disease, see vomiting and spitting of blood, under head of *Blood*.

HÆMATOCELE (Greek *aima*, and *kele*, a

tumour). The soft fluctuating tumour of the testicles, so called, is generally caused by a blow or other injury to the part, or by the division of a vessel in the operation for hydrocele; it is simply blood effused into the cavity of the *tunica vaginalis*, which flows out as soon as an opening is made for its escape, and, this is the only way of getting rid of it; the operation is the same as that for *Hydrocele*, (which see), and *Testicle*.

HÆMOPTYSIS (Greek *aima* and *ptyo*). Spitting of blood, sometimes produced by a fulness of the vessels of the lungs, but more commonly by their rupture, in consequence of ulceration. The blood in this case is of a more florid colour, and smaller in quantity than when vomited up from the stomach, as in the preceding disease: this may be either symptomatic of disease, as in consumption, when it would be called *secondary*, or it may be *primary*, or *idiopathic*, constituting the disease itself. Again, it may occur at irregular or regular periods, as after the suppression of some customary evacuation, in which case it is termed *vicarious*. Congestion of the vessels of the lungs most commonly causes spitting of blood, which generally proceeds from the mucous membrane of the bronchial tubes following the course of the expelled air in exhalation. When it is occasioned by rupture of the vessels, there is so great an expulsion of the vital fluid that the case is soon likely to have a fatal termination.

Hæmoptysis sometimes occurs in youth, as bleeding from the nose may, and we then consider it symptomatic of a morbid state of the constitution. It is very frequently *vicarious*—that is, substituted, or acting for another; it is most commonly so of the female menstruation, and does not often lead to any serious results. It is mostly *secondary* as a symptom of *Consumption* (which see), although that disease will sometimes run its course without any spitting of blood; and sometimes this may occur at the commencement of it, preceding for some years any of its more marked symptoms.

One of the organic diseases which produces Hæmoptysis is that affecting the left side of the heart: in this case the blood is impeded in its passage through the lungs, which become loaded or congested in consequence, and hæmorrhage ensues. Violent exertion in speaking, or singing, will also sometimes cause spitting of blood, which, in all cases, should be looked on with apprehension, as, whether considered as a symptom or a disease, it is a truly formidable malady, to which plethoric people, or those

who have narrow and ill-formed chests, are especially liable.

Treatment. As congestion is most commonly the exciting cause, the removal of blood from between the shoulders, or the hollow of the throat just above the breast bone, is one of the remedial means to be employed. Leeches, or the cupping apparatus, will be the proper agents for this purpose. Dr. Graves says that "no topical bleeding appears to me so useful as the oozing of blood from that situation where the cough is teasing, and Hæmoptysis considerable; six leeches should be applied every six hours, or in less severe cases a smaller number, and at more distant intervals."

Elevating the breast and shoulders, admitting plenty of fresh air, with spare diet, and perfect quiet, are among the other most useful measures to be adopted. The bowels should be freely opened by means of a saline purgative, preceded, where they are costive, by from 3 to 5 grains of Calomel; and assisted by an enema of Salt and Gruel; if the bleeding continues, 2 grains of Powder of Ipecacuanha should be administered every quarter of an hour until it abates; the chest also should be sponged with Vinegar and Cold Water, and a dessert spoonful of the former in half a wineglassful of the latter will be a useful accompaniment to any other medicines which may be thought necessary. The remedies will vary considerably in accordance with the peculiarities of the case; sometimes mineral acids, such as the Dilute Sulphuric, from 15 to 20 drops in Cold Water three or four times a day; in some cases 10 or 15 drops of Spirits of Turpentine may be given, and as a ready remedy, when no other is to be obtained, Common Salt, a teaspoonful at the time, repeated frequently. To get up the strength after an attack of this kind, nutritious diet, with preparations of Iron, or bitter tonics, and mineral acids. Persons subject to Hæmoptysis, from whatever cause, should live abstemiously, avoid late hours, exposure to cold or great heat, and excitement of any kind. In habitual and protracted cases, Dr. Graves recommends a change of residence to Australia.

HÆMORRHAGE (Greek *aima*, and *rhēgyo*, to burst forth). A flux of blood from the nose, lungs, intestines, or any other part, as we apply the term, which by the ancients was understood to mean a bleeding at the nose only. Of the different kinds of internal Hæmorrhage, we have spoken above, or at other parts this volume; of the external, as from wounds, something has been said under the head of *Arteries*, and more will be

under that of *Wounds*, and also of *Ligature*, *Styptic*, and *Tourniquet*, all of which are resorted to for the stopping of Hæmorrhage; although in the first and last only can much dependance be placed, as it is of a very serious character. We would just make a few observations here on the spontaneous cessation of Hæmorrhage, which sometimes occurs when a considerable quantity of blood has been lost from a vein or artery, and the patient faints, in this case death does not immediately ensue, nor does the bleeding recommence. After the return to consciousness, although at no distant period, repetitions of the bleeding may occur, and ultimate exhaustion from loss of blood take place. In operations, such as the removal of a leg or arm, it is only found necessary to tie or "take up," as we term it, the larger arteries, although those which are severed are very numerous; the smaller ones stop bleeding of themselves, and their orifices become closed or obliterated by a natural contraction, which is favoured by the application of cold and styptics.

HAIR. This is one of the common integuments of the body, consisting of dry, elastic filaments arising from the skin of all animals except fishes and reptiles, that is of all warm-blooded animals; it grows in the cellular membrane, having a cylindrical root surrounded by a capsule, with nerves, &c., which is called the bulb, and which is nourished by a fluid in the membrane.

Exclusive of the animal matter which forms the basis of Hair, and which is the same in all, there is a colouring matter which is separable from it, and the hue of which varies according to the kind of hair, and to this the difference of tint is owing. To this fatty substance, also, Vauquelin attributes the suppleness, elasticity, and unalterability of Hair, and also that it burns rapidly, and combines with alkalies to form soap. All animal integuments, such as horns, nails, feathers, fur, wool, are, to a certain extent, supple and elastic, and all are formed of the same animal mucus, and include in their composition a portion of this oil. It has been found that Hair is soluble in water at a very high temperature; as in a Papin's Digester, where it leaves a residue of the oil above spoken of, mixed with sulphuret of iron, and some sulphuretted hydrogen, the iron being found most abundant in the darkest Hair; sulphur appears to be the ingredient on which the action of the black dyes of red or grey Hairs depend.

The whole subject of the *Growth and Structure of the Hair* is one of the most

curious and interesting connected with our animal economy: in order to present it clearly and distinctly to our readers as possible we give it in a series of propositions:—

1. Hair is found to grow on all parts of the surface of the body, except the palms of the hands and the soles of the feet.

2. The Hair differs considerably in length, thickness, shape, and colour; according to situation, race, family, sex, and age.

3. As Hair is a bad conductor of heat, it is obviously one of the most appropriate coverings for the bodies of animals, or the head of man, because heat escapes very slowly through it. The surface of the body is protected from the influence of excessive heat, moisture, and electricity, by means of the Hair.

4. "The Hair," says Mr. Paget, the eminent anatomist, "in its constant growth, serves, over and above its local purposes, for the advantage of the whole body, in that, as it grows, it removes from the blood the bisulphate of protein and other constituents of its substance, which are thus excreted from the body." It is therefore evident that the Hair performs an important part in the animal economy. It has been remarked that shaving or cutting the Hair assists in the removal of carbon and hydrogen from the system; consequently long hair is injurious.

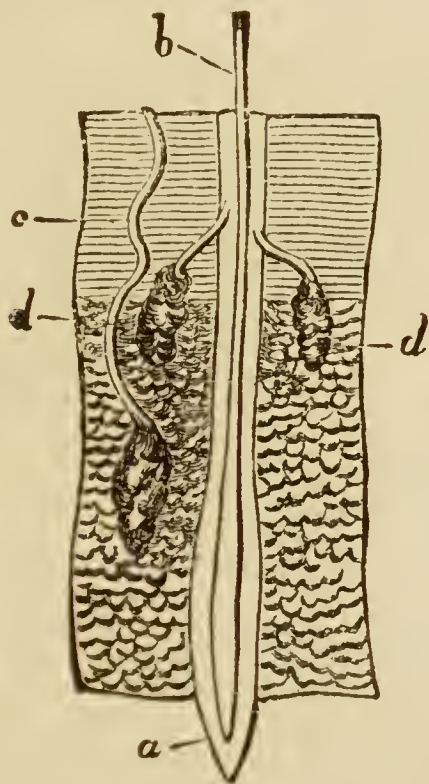


Fig. 1.

5. If we but look at the back of our hands we shall observe the Hair issuing from small

depressions in the skin. These depressions are the orifices of the hair-follicles, which extend to various depths in the corium, and are always lined with cells of the same kind as those found in the epidermis.

6. Fig. 1 is a diagram that will explain how the Hair is retained in the skin, and if you examine it attentively you will be able to understand the relative positions of the various parts. The diagram represents a section of the human scalp, showing the manner in which the Hair penetrates it; *a*, is the hair-follicle; *b*, the Hair within the follicle; *c*, the epidermis; *d d*, the sebaceous glands opening into the hair-follicle; *e*, the fatty tissue, with the cellular tissue underneath it, in which the base of the hair-follicle is embedded.

7. As we have seen above, the sweat-glands are connected with the hair-follicles; and, in the accompanying figure, you will observe that there are no less than six of these glands opening into the hair-follicle which belongs to the beard.

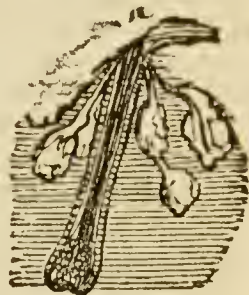


Fig. 2.

8. The *shaft* of the Hair is that part which you discern above the surface of the skin (fig. 1, *b*), and if you follow it into that membrane, you will see that it is lodged in a fold of what is termed basement mem-

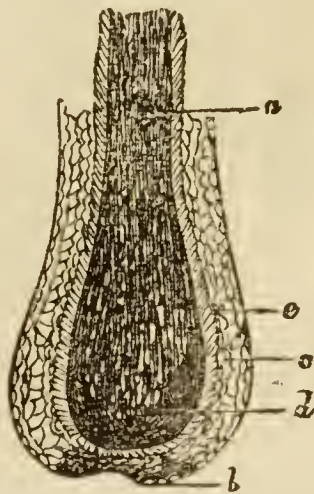


Fig. 3.

brane, or its follicle, which is larger or bulbous at the lower part, like the Hair which is inside it. The accompanying diagram will enable you to understand the relative positions of the adjacent parts to the Hair.

(Fig. 3. *a*, a mass of cells in the centre of the hair, filled with pigment; *b*, basement membrane of the hair follicle; *c*, layer of epidermic cells; *d*, imbricated cells, loaded with pigment at the lower part, and becoming

gradually compressed as they approach the surface of the skin; *e*, layer of imbricated cells.)

9. The hair-follicle is merely a turning-in of the skin, so as to invest the hair, and its inside is a continuation of the epidermis; for the cells are of the same nature (fig. 2, *e*), the deeper ones being somewhat round, while the superficial ones are flattened and scaly (*e*). The follicle is kept in its place according to the size and strength of the Hair, by means of the adjoining tissues (see, 6, fig. 1), and the small vessels, called capillaries, which afford materials for increase.

10. The hair grows from the bottom of the follicle, being formed by the secretions of these cells, and being gradually pushed upwards by them, so as to increase its length.

11. As the cells ascend in the bulb of the Hair, they become larger until they reach the central part—hence the increased size of the bulb; but when the shaft commences, the cells become longer, denser, and, in fact, fibrous.

12. By simply crushing the Hair, we are able to discern its fibrous nature; but this may be more readily demonstrated after the hair has been softened by maceration in an acid.

13. Hair consists of a *cortical* or fibrous horny texture which invests it, and a *medullary* or pith-like substance, which is observed on the inside.

14. The *cortex*, or bark of the Hair, is formed by a single layer of cells being imbricated (fig. 2, *e*), and forming a thin layer outside the fibrous tissue of the shaft. These

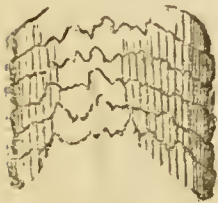


Fig. 4.

cells overlap each other, so that their edges give a serrated feel and appearance to the Hair. If you rub your finger from root to point over a Hair, and then rub it backwards, you will find that its surface is serrated; and if the Hair is very large, you will find that the roughness is greater, because there is usually a double series of imbrications in the large Hairs.

(Fig. 4. A portion of Hair magnified so as to show the imbrication of the outside).

15. If we make a longitudinal section of the shaft of a Hair, we find that the centre is made up of a series of cells, filled up with pigment, and contained in the fibrous part of its substance. In order to observe this appearance, we must use a sharp razor to make the section, and a magnifying power of about 150; but as every person is not able to do

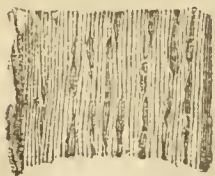


Fig. 5.

so, we have given a diagram of the appearance of the longitudinal section of the Hair.

(Fig. 5. Longitudinal section of a Hair, showing the imbrication of the cortex, and the pigment cells in the fibrous part).

16. If we take a Hair, and cut it across with a sharp razor, so as to make a very thin section of it—a mere shaving, in fact—we shall observe three parts: first, a thin varnish-like layer of flattened cells; then a set of fibres, which are placed further apart as they approach the centre, which is dotted here and there with pigment-cells in some Hairs, but is always loose, and looks like pith.



Fig. 6.

(Fig. 6. Transverse section of a Hair, showing the three different textures).

17. The Hair varies in length according to situation, sex, and race. In the Kurilian race, there are individuals who have Hair growing down the back and covering nearly the whole body. The average length of the beard is ten inches, but some men have had beards that swept the ground. Women have also been met with whose hair reached to their feet, but yet the ordinary length is only from twenty to forty inches.

18. Colour influences its texture: thus flaxen Hair is said to be the finest, and black the coarsest; and as Hair becomes grey, it becomes coarser. Withof, a German anatomist, states that a square inch of the skin of the head contains 598 black Hairs, 648 chesnut Hairs, and 728 flaxen Hairs.

19. The colours and shades of the human Hair are very numerous, and depend, in a measure, upon age, climate, and race. The following table will give some idea of the varieties caused by race and climatal influence:

Race or Tribe.	Hair.
Afghans.....	black.
Arabs.....	black and crisp, with grizzley beards.
Armenians.....	dark.
Berberines, or Nubians of the Nile.....	dark, and strongly frizzled.
Californians.....	black, long, very strong, and not woolly.
Chinese & Indo- Chinese.....	thick, coarse, lank, and black, with scanty beards.
Circassians.....	brown or black.
Egyptians.....	black and crisp.
Endamènes (New Guinea)	thick, rough, and shining, without being woolly.

Esquimaux	{ coal - black, straight, strong, and long.
Ethiopian	black and crisp.
Greeks	black, brown, and flaxen
Kamtschatkans ..	black.
Kurds.....	black.
Kurilians or Ainos	very black.
Mantschoos	brown.
Mexicans	{ thick, black, coarse, and glossy; beard thin.
Mongolians	{ black, stiff, straight, and sparing.
Ossetines	{ brown or light, and sometimes red beards.
Patagonians	{ lank and black; beard scanty.
Singhalese.....	black.

It is worthy of remark with respect to the colour of the Hair, that it varies with the colour of the iris, or coloured part of the eye, and the general hue of the skin. It has been remarked, and with more degree of truth than is generally believed, that the darker the Hair the stronger the body, and *vice versa*.

20. The difference of colour in human Hair appears to depend, according to Vaucquelin, on the presence or absence of a peculiar oil. He states that black Hair consists of—1. An animal matter, which constitutes the greater part. 2. A white concrete oil, in small quantity. 3. Another oil of a greyish-green colour, more abundant than the former. 4. Iron, the state of which in the hair is uncertain. 5. A minute proportion of oxide of manganese. 6. Phosphate of lime. 7. Carbonate of lime, in very small quantity. 8. Silica and sulphur, each in considerable quantity.

21. Hair is remarkably elastic and strong. A single Hair from the head of a boy only eight years of age supported the weight of 7·812 grains; and one from the head of a man twenty-two years of age supported 14·285 grains. Weber states that a Hair 10 inches long will stretch to 13 inches.

Management of the Hair.—Pass a fine tooth-comb, at regular intervals every twenty-four hours, through the Hair, in order to keep it from matting or entangling; separate the Hairs carefully and repeatedly, so as to allow the air to pass through them for several minutes; use a brush that will serve the double purpose of cleansing the scalp and gently stimulating the hair-bulbs. Before going to bed, it will be desirable to part the Hair evenly, so as to avoid false folds, or what is commonly called turning against the grain, which might even cause the Hairs to break. Such are the ordinary requirements with regard to the

management of the Hair. Some persons carry to excess the dressing and adornment of the Hair, especially those who are gifted with that of the finest quality. Thus, for example, females who are in the habit, during the ordinary operations of the toilette, of dragging and twisting the Hair, so as almost to draw the skin with it; the effect of which is, in the first instance, to break the Hairs and fatigue the scalp, and finally to alter the bulb itself.

Management of the Hair in Childhood.

As this is an important branch of our present subject, future appearance and comfort depending greatly upon it, we shall devote some space to directions thereupon. Ablution and friction are the most requisite means for keeping the skin of the scalp in a healthy state, which is necessary to the proper growth of the Hair. Remove the epidermis by washing and rubbing frequently, once a day is not too often, although once a week is commonly thought frequent enough, and where it is so, soap should be used, as simple water will not remove the tough and clogged epidermis which obstructs the growth of the Hair. In the case of daily ablution there is no necessity for this, indeed it would be injurious, as it would remove too much of the oily matter by which this growth is encouraged and facilitated: by the too frequent application of soap, the Hair is rendered dry and brittle; with proper attention to cleanliness it needs very little of this, or any solvent of oil. For the long Hair of girls, occasional washing with the Yolk of an Egg may be beneficial, and for all, a little grease is necessary about every two or three days. This, although it does not act as a stimulant, as many suppose, adds to the growth of the Hair, by allowing it to escape from its follicles or secreting cavities; it may be rendered stimulating by the addition of Cantharides or Spirit of Ammonia, one or other of which is no doubt employed in the preparation of the celebrated Rowland's Macassar. As to the kind of grease to be used, it is really of little consequence; some animal oil is perhaps the best; the vegetable oils generally being too drying and heating. Bear's Grease is very good, although, not perhaps better than any other animal fat; hence the public do not suffer much from the pleasing delusion that they purchase this grease in the pots which are said to contain it.

But rubbing the scalp, and combing the hair, come before greasing, and both these operations should be regularly, frequently, and gently performed; if the towel be too rough, or the comb too sharp-pointed, or

the brush too stiff and penetrating, they will be likely to set up inflammatory action in the skin: to avoid this danger, some persons are accustomed to use soft brushes only, but this is a practice we cannot recommend, as a brush of this kind will not penetrate the poll itself, and will have little or no effect upon a stubborn crop of Hair; the brush, like the comb, should always be felt, but not painfully so, and if injury is ever done by either, it is the fault of the hand that directs it, and not of the instrument; let this be properly used, and it will ever prove serviceable. We do not recommend the small-toothed comb for children; if used at all, it should be very gently and carefully.

We were speaking of grease for the Hair, and said that animal oil or fat was the best; Horse Fat is largely used in the manufacture of the so-called Bear's Grease, and it is a very good application. Neat's Foot and Trotter Oil are both good; and so is Cod Liver and Castor Oil, notwithstanding that the latter is vegetable, its thickness prevents its drying so quickly as Olive or Almond Oils, which are generally used: pure Lard does perhaps, as well as anything, and this, with a little scent, generally constitutes the article sold under the name of Scented Pomade; Suet although of itself too hard, makes a very good application, when mixed with an animal, or even with a vegetable oil; this latter appears to be the usual composition of *Pomatum* (which see.)

Diseases of the Hair. These are marked by an alteration of its natural colour, condition, or quantity, sometimes by its loss altogether, which may be the result of age or disease; in the latter case it may be confined to the skin, as in *Porriago favosa*, or to the Hair follicle itself, as in *Porriago declavans*, or, as it is now more commonly called, *Alopecia circumscripta*, that is, circumscribed baldness; in this case the Hair falls off without any apparent cause, and leaves circular patches of smooth shining skin, surrounded by healthy Hair, which stands up abruptly around the edges: sometimes there are only two or three patches, at other times they are numerous; they may be quite isolated, or as in some cases joined together by narrow pathways, as it were, which can be seen through the Hair. The cause of this disorder does not appear to be well understood, but it may be debility, or a want of vital power in the general system, or the part affected, it having been found that a tonic course of treatment, and stimulant applications, will sometimes cause the Hair to grow again.

Nothing better for this purpose can be used than Castor Oil and Tincture of Cantharides, in the proportion of one-fourth of the latter, to 3 of the former. For the baldness caused by age, of course there is no remedy; this is the result of constitutional weakness, which no medicinal, nor dietary treatment will repair. (For more remarks upon this head, see *Baldness*.)

A change in the colour of the Hair may be produced by fever, or some other acute disease affecting the whole system, as well as by age; in the latter case it is gradual, and usually extends over many years; in the former it is more rapid, but not so much so as the change produced by some powerful emotions of the mind, fear especially, under the influence of which a person's Hair has become perfectly blanched in the course of a few hours: from a darker colour to grey or white is the most common change of colour, but cases are on record in which the sudden alteration has been from black or brown or red, and even from brown to black. Why this sudden effect should be produced by strong mental emotion, we know not; if it were gradual, we might safely attribute it to a diminution of vital power, which is sure to ensue in the reaction after undue excitement. Such is the case in intemperance and other excesses, which often cause a change of colour, if not a loss of the Hair altogether. During and after pregnancy the head sometimes loses its natural covering; a stimulant application will generally cause it to grow again, especially if the patient recovers her health and strength. The following preparation for this purpose has been recommended as almost a complete specific:—Powdered Cantharides, 1 ounce; Purified Spirits of Turpentine, 3 ounces; Neatsfoot Oil, 5 ounces: put the first two ingredients into a bottle together, and let them stand for a fortnight; strain, and add the last; shake up well, and apply to the head every night and morning; if it irritates the skin too much, increase the quantity of Oil; if, on the other hand, it appears too weak, so as not to produce a sensation of heat, diminish the proportion of Oil. The unpleasant odour is a great objection to the use of this preparation; a little Essence of Bergamot may be added, but this will not hide the scent of the Turpentine. The Castor Oil and Tincture of Cantharides previously recommended will no doubt have as good an effect, and this is certainly much more pleasant to use, especially if slightly perfumed. This stimulant application will often retard the loss of Hair in age, and the premature baldness.

which sometimes occurs. (For further particulars on this head, see *Skin Diseases*.)

Removal of the Hair is common in those febrile and inflammatory diseases in which it is desirable to keep the head cool, and also in several skin diseases which affect the scalp; it may be cut off with a pair of scissors, or shaved close, the latter is the better mode of procedure. Patients, especially females, sometimes object to this, but they should make up their minds to the necessity; the more especially, as it is likely, that if the disease be so severe as to require the locks to be shorn, they will, during convalescence, come out of themselves, to make way for a fresh crop, and the growth of this will be facilitated by the previous entire removal of the old Hair.

When this natural covering is removed, care should be taken to protect the head from cold, otherwise, neuralgic or rheumatic attacks may be looked for.

There is no doubt that frequent cutting strengthens the Hair, as frequent brushing and combing promotes its growth, but it should not be cut too closely, nor more frequently than about once in three weeks.

Among the diseases to which the Hair is subject, we should have mentioned that, almost peculiar to Poland, in which it becomes thickened and matted together by a glutinous kind of sweat; in this condition the Hair not only bleeds, but becomes sensitive, probably from the irritability of the skin at its base. See *Plica Polonica*.

HAIR GLOVE. This is a glove woven of horse-hair, with the ends left on; it is used to remove the superfluous cuticle, and in all cases where counter irritation is required, may be employed with advantage. See *Friction*.

HAIR LICHEN. A variety of lichenous rash, called *Lichen pilaris*, in which the pimples grow about the roots of the hair; they desquamate in about ten days.

HAIR POWDER. A fine powder of flour or starch; it is commonly scented, and in this state is known as Violet Powder. It was formerly much used for sprinkling over the head, but that fashion has now nearly gone out. Under the name of Baby's Powder, it is much employed in dusting infants with, after they are washed, to absorb any moisture that the towel may have left; applied to parts that are chafed or excoriated, it has a very beneficial effect.

HAIR PYRITES. The native sulphuret of nickel, which occurs in capillary filaments, is so called by the Germans.

HAIR SALT. A native sulphate of magnesia; it sometimes occurs as a fine hair-like

incrustation upon the damp walls of cellars and in buildings.

HAIR WORM. A filiform or hair-like animal, found in fresh water or in the earth, of which there are several species; it belongs to the genus of worms called *Gordius*. It is sometimes swallowed in the water which we drink, and may therefore be included in the list of intestinal *Worms*, (which see), and *Gordius*.

HAIR-BRAINED PASSION. A kind of temporary madness, which has been called by M. Pinel the *Mania Sans Delire*, and ascribed to the effects of a want of proper training of a mind naturally perverse and unruly. See *Madness, Passion*.

HALITUS (Latin *halo*, to breathe). An aqueous vapour or gas for *Inhalation*, (which see).

HALLUCINATION (Latin *hallucinor*, to mistake). Depraved or erroneous *Imagination*, (which see).

HALO (Greek *alos*, an *area*). The circle or ring surrounding the nipples, generally called *areola*.

HALOGENIA or **HALOGENS** (Greek *als* salt, and *gennao*, to produce). A name given by Berzelius to those substances which, by combination with metals produce saline compounds, such as bromine, chlorine, fluorine, iodine which are simple halogens, and cyanogen, which is a compound halogen.

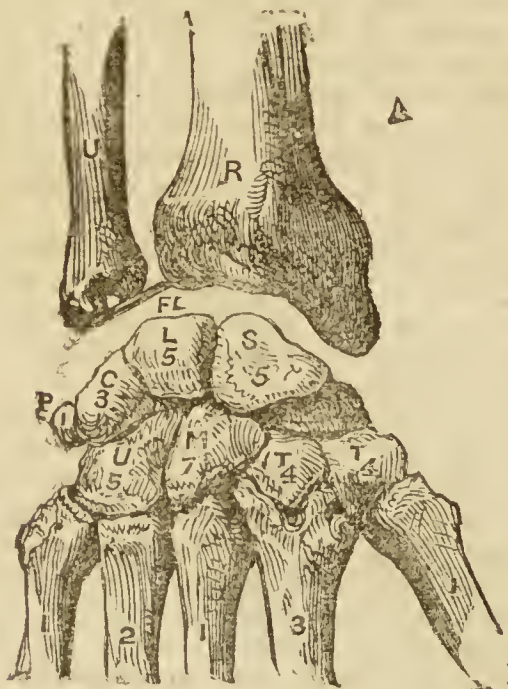
HALOID (Greek *als*, sea-salt, and *eidos*, resemblance). A term applied to those compounds which have a metal on the one hand, and chlorine, fluorine, iodine, and the radicals of the Hydracids in general, excepting sulphur, on the other. These compounds are called *Haloid Salts*, because in construction they are all similar to sea-salt; and the term *Halogenous* is applied to chlorine and those elements by which the above salts are generated.

HALO-SIGNATUS. The name given by Sir C. Bell to the impression of the ciliary processes on the anterior surface of the vitreous humour, because it consists of a circle of radiations. See *Eye*.

HAND. In Latin *manus*, hence manuals—books for the hand, or handy books, &c. The word itself is Saxon, coming most likely from *henton*, to follow, take, or seize; we find something like it in the Greek *kandano*, and the Latin *hendo* in *prehendo*. From its derivatives, handy, handsome, &c., it would seem to proceed from a root signifying beauty and fitness, and nothing could be more appropriate than such a derivation, as all must admit who have studied the anatomical construction of this important organ. We recommend each of our readers as may

wish to have a full understanding of this, connected with a sense of God's wisdom and goodness, to peruse attentively Bell's eloquent *Bridgewater Treatise* on the subject. We shall endeavour to place before them such a description as may suffice for all purposes which it is the object of this book to answer.

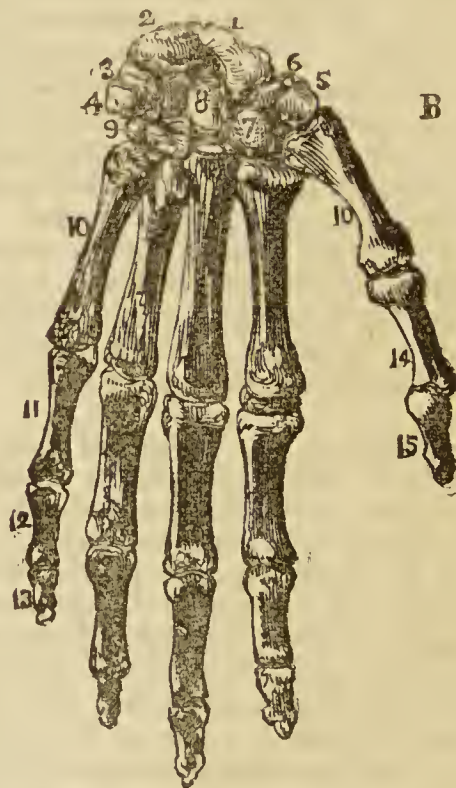
Let us observe, first that the Hand consists entirely of small bones, so constructed and articulated, or jointed together, as to conduce in the greatest possible degree, alike to strength and flexibility. There are in the structure altogether 27 bones, which may be arranged under three divisions, as follows: 1st. The *Carpus* or wrist; comprising the *Scaphoid*, or boat-shaped; the *Semilunar*, or half-moon; the *Cuneiform*, or wedge-like; the *Pisiform*, or pea-like; the *Trapezium* and the *Trapezoid*, both four-sided; the *Os magnum*, or large bone; and the *Unciform* or hook-like. 2nd. The *Metacarpus*, including the four bones which constitute the palm and back of the hand; the upper ends have plain surfaces, the lower convex; sometimes the first bone of the thumb is placed in this *metacarpal* division, and sometimes in the 3rd, *Pollex* or thumb, which has 3 bones, like each of the 4th, the *Digiti* or fingers, which consist of 12 bones arranged in three *phalanges*, or rows, giving to each finger two joints, besides that which connects it with the *metacarpal*, or 2nd division.



After this general outline of the bony structure, our readers will be better prepared to enter into the minuter details, as exhibited in the diagrams which we now proceed to place before them. Diagram A., from

Wilson, shows us the dorsal or back surface of the bones of the carpus, disjoined from their articulation with the lower extremities of the *Radius* and *Ulna*, which constitute what is called the Forearm, being the lower division of the limb (see cut, under head *Fractures*, p. 291) R and U in the diagram, distinguish these bones, and F, the inter-articular fibro-cartilage, which is attached to the styloid process of the ulna, and to the margin of the articular surface of the radius; on it, when in their natural state of connection, work the carpal bones. S. L. C. and P. representing respectively the scaphoid, the semilunar, the cuneiform, and the pisiforme, the figures 5, 5, 3, 1, showing the number of other bones with which each articulates. In the second or carpal row, we have T. T. M. and U. the trapezium, trapezoid, os magnum, and unciform, articulating respectively with 4, 4, 7, and 5 other bones. The longer bones in the diagram are those of the metacarpus, the figures on them showing with how many other bones they articulate.

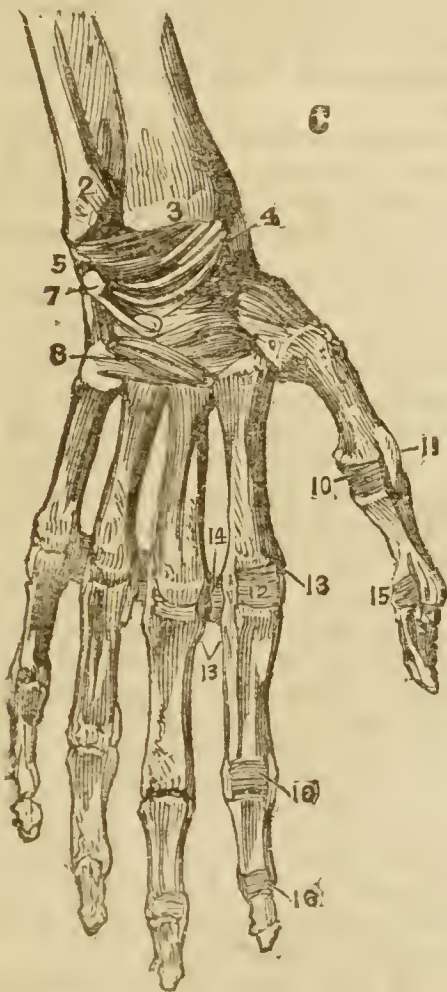
In diagram B, also after Wilson, we have



the left Hand, viewed in its anterior or palmar aspect, that is, with the under side turned towards us; figures 1, 2, 3, 4, make the upper row of carpal bones, as named above; 5 is the extreme bone of the second row, the trapezium; and 6, a groove in it which lodges and protects an important tendon, that of the *Flexor carpi radialis*; 7, 8, and 9, are the three other bones con-

stituting the second carpal row, and also named above; 10, 10, mark the 5 metacarpal bones; 11, 11, the first row of phalanges; 12, 12, the second row; 13, 13, the third row, or as they are called unequal phalanges; 14 is the first phalanx of the thumb, which, according to this arrangement, has we see but two bones, 15 being that at the extremity. Into the peculiarities in the conformation of all these bones, we need not enter; much might be said about the wonderful marks of wisdom in design, and constructive skill, which they all exhibit, each being intended, and admirably adapted, to answer a particular end in the various motions of the organ to which they belong.

But how, it may be asked, are these motions accomplished? Like all the other motions of the body, by means of muscular dilation and contraction. Of the muscles of the Hand we shall speak presently; at present we would call our readers' attention to the articulations and ligaments, by the latter of which the bones are kept in their proper positions. In the following diagram (C),

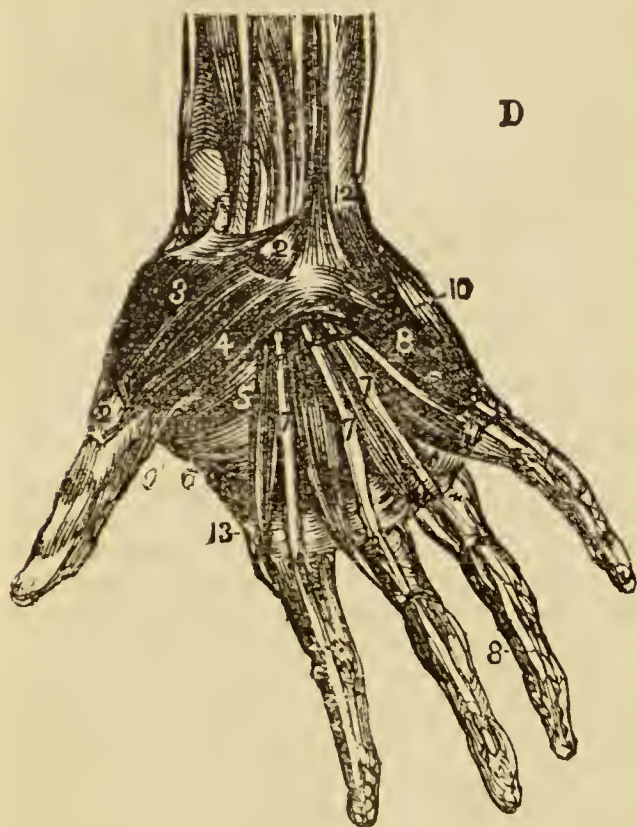


are exhibited the ligaments of the anterior aspect of the wrist and Hand; 1 is the lower part of the Interosseous membrane, which occupies the space between the ulnar and

the radius; 2 is the Antero-inferior radio-ulnar ligament; 3, the Anterior ligament of the wrist joint; 4 is the External, and 5, the Internal Lateral ligament; 6, the Palmar ligaments of the carpus; 7, Pisiform bone, with its ligaments; 8, Ligaments connecting the second range of the carpal bones with the metacarpal, and the latter with each other; 9, the Capsular ligament of the carpo-metacarpal articulation of the thumb; 10, the Anterior ligament of the metacarpo-phalangeal articulation of the thumb; 11, one of the lateral ligaments of that articulation; 12, Anterior ligament of the metacarpal-phalangeal articulation of the index-finger; from the other fingers this has been removed; 13, Lateral ligaments of the same articulation; 14, Transverse ligament connecting the heads of the metacarpal bones of the index and middle fingers, the same ligament is seen between the other fingers; 15, Anterior and one lateral ligament of the phalangeal articulation of the thumb; 16, Anterior and lateral ligaments of the phalangeal articulations of the index finger; the anterior ligaments are removed in the other fingers, but the lateral ligaments remain. From this the non-professional reader may form some idea of the complexity of the structure we are attempting to describe, and the number and position of the ligamentous chords, and bands, which are, as it were, woven across and around the joints.

But why speak of complexity of structure, when we have as yet said nothing about the membranes, and other tissues, which fill up the bony cavities, and go to form the perfect hand? Of the veins, and arteries, and capillary vessels by which the vital fluid is circulated through all its parts; of the network of nerves, those electrical lines of sensation; of the muscles, which, according as the will directs, move the joints this way and that, contract or expand the fingers, close the hand for a friendly grasp, or elench the fist for the deadly encounter. One more diagram we must give, to exhibit the muscles, the cords and pulleys by which the delicate machinery is worked. Diagram D gives us an inner or palmar view of the hand, divested of the skin: 1 is the Annular ligament; 2, 2, Origin and insertion of the Abductor pollicis muscle, the middle portion having been removed; 3 is the Flexor ossis metacarpi, or Apponeus pollicis; 4, Superficial portion of the Flexor brevis pollicis; 5, deep portion of the same; 6, Adductor pollicis; 7, 7, the Lumbricales muscles, arising from the deep Flexor tendons, upon which the figures are placed; 8, one of the tendons of the deep Flexor

passing between the two terminal steps of the tendon of the Flexor sublimis to reach the last phalanx; 9, the tendon of



the Flexor longus pollicis passing between the two portions of the Flexor brevis to the last phalanx; 10, Abductor minimi digiti; 11, Flexor brevis minimi digiti, with the edge of the Adductor ossis metacarpi projecting beyond the inner border of it; 12, Pisiform bone; 13, First dorsal interosseous muscle, the abductor indices. The actions produced by these muscles are, 1, those of the wrist, in which there is but little movement between the bones in each range; but more is permitted between the two ranges, the motions of the latter being those of flexion and extension; 2, the movements of the metacarpal on the carpal bones, which are restricted to a slight degree of sliding motion, with the exception of the articulation of the metacarpal bone of the thumb with the trapezium, where the movements are flexion, extension, abduction, adduction, and circumduction; 4, the movements of the phalangeal joints, which are flexion and extension, the motions being more free between the first and second, than between the second and third.

We have thus endeavoured to explain some of the most remarkable peculiarities observable in the structure of the Hand, in which resides chiefly the sense of touch, that most delicate, and universal, and perhaps, useful of all the senses. Very truly

and eloquently does Dr. Wilson, in his "Five Gateways of Knowledge," observe:—"In many respects the organ of touch as embodied in the Hand, is the most wonderful of the senses. The organs of the other senses are passive; the organ of touch alone is active. The eye, the ear, and the nostril stand simply open; light, sound, and fragrance enter, and we are compelled to see, to hear, and to smell; but the Hand selects what it shall touch, and touches what it pleases. It puts away from it the things which it hates, and beckons towards it the things which it desires; unlike the eye, which must often gaze transfixed at horrible sights, from which it cannot turn; and the ear, which cannot escape from the torture of discordant sounds; and the nostril, which cannot protect itself from hateful odours.

"Moreover, the Hand cares not only for its own wants, but when the other organs of the senses are rendered useless, takes their duties upon it. The Hand of the blind man goes with him as an eye through the streets, and safely threads for him all the devious way: it looks for him at the faces of his friends, and tells him whose kindly features are gazing on him; it peruses books for him, and quickens the long hours by its silent readings.

"It ministers as willingly to the deaf; and when the tongue is dumb and the ear stopped, its fingers speak eloquently to the eye, and enable it to discharge the unwonted office of a listener.

"The organs of all the other senses, also, even in their greatest perfection, are beholden to the Hand for the enhancement and the exaltation of their powers. It constructs for the eye a copy of itself, and thus gives it a telescope with which to range among the stars; and by another copy on a slightly different plan, furnishes it with a microscope, and introduces it into a new world of wonders. It constructs for the ear the instruments by which it is educated, and sounds them in its hearing till its powers are trained to the full. It plucks for the nostril the flower which it longs to smell, and distils for it the fragrance which it covets. As for the tongue, if it had not the Hand to serve it, it might abdicate its throne as the Lord of Taste. In short, the organ of touch is the minister of its sister senses, and, without any play of words, is the handmaid of them all.

"And if the Hand thus munificently serves the body, not less amply does it give expression to the genius and the wit, the courage and the affection, the will and the power of man. Put a sword into it, and it

will fight for him; put a plough into it, and it will till for him; put a harp into it, and it will play for him; put a pencil into it, and it will paint for him; put a pen into it, and it will speak for him; plead for him, pray for him. What will it not do? What has it not done? A steam-engine is but a larger Hand, made to extend its powers by the little Hand of man! An electric telegraph is but a long pen for that little Hand to write with! All our huge cannons and other weapons of war, with which we so effectually slay our brethren, are only Cain's Hand made bigger, and stronger, and bloodier! What, moreover, is a ship, a railway, a lighthouse, or a palace,—what, indeed, is a whole city, a whole continent of cities, all the cities of the globe, nay, the very globe itself, in so far as man has changed it, but the work of that giant Hand, with which the human race, acting as one mighty man, has executed its will!

“When I think of all that man and woman's Hand has wrought, from the day when Eve put forth her erring Hand to pluck the fruit of the forbidden tree, to that dark hour when the pierced Hands of the Saviour of the world were nailed to the predicted tree of shame, and of all that human Hands have done of good and evil since, I lift up my Hand, and gaze upon it with wonder and awe. What an instrument for good it is! What an instrument for evil! and all the day long it never is idle. There is no implement which it cannot wield, and it should never in working hours be without one. We unwisely restrict the term handicraftsman, or handworker, to the more laborious callings; but it belongs to all honest, earnest men and women, and is a title which each should covet. For the queen's Hand there is the sceptre, and for the soldier's Hand the sword; for the carpenter's Hand the saw, and for the smith's Hand the hammer; for the farmer's Hand the plough; for the miner's Hand the spade; for the sailor's Hand the oar; for the painter's Hand the brush; for the sculptor's Hand the chisel; for the poet's Hand the pen; and for the woman's Hand the needle. If none of these or the like will fit us, the felon's chain should be round our wrist, and our Hand on the prisoner's crank. But for each willing man and woman there is a tool they may learn to handle; for all, there is the command, “Whatsoever thy Hand findeth to do, do it with all thy might.”

Chiromancy or Palmistry (the former

coming from the Greek *cheir*, the hand, and the latter having relation to the palm or soft part of the hand), are terms applied to the art or science, as its professors would call it, of deciphering a person's disposition by the lines naturally impressed upon the palm: not only can this be done, say some, but the future fate and fortune of the individual can be foretold by a study of these mystical lines; so that if one can but read them aright, he need be in no doubt as to the steps in life which it behoves him to take. But who can so read them? Pretenders to the art there have been in all ages, and there has been no want of credulous believers at any time; they exist even in this present enlightened age, and the palm of the brown-faced sybil is yet frequently crossed with the piece of silver which is to be the *open sesame* of her store of lying prophecies. Latterly, it has been, “Show me your writing, and I'll show you your character,” and a specimen of one's style of calligraphy, *with a dozen postage-stamps*, has been sufficient: the guardian of the mysteries of the future no longer wears a red cloak and lives under the greenwood tree, but issues her sybilline leaves from some semi-fashionable quarter of London, and most likely wears erinoline and hoops, and a misereosopic bonnet. We get into easy ways of reading difficult problems, and palmistry is no longer an occult science, but a very simple affair indeed. Still, joking apart, there may be something in it after all; we believe to a certain extent in Chiromancy; no doubt the general shape, and certainly the condition of the hand, will afford us some insight into the character and pursuits of the individual to whom it belongs. No doubt, also, that a person's handwriting may afford some clue as to his tastes and temperament, and perhaps his mode of life, but very little; there are so many modifying circumstances, that both hand and handwriting are very unsafe guides. A small white hand has ever been considered as an indication of gentlemanly birth and breeding, and among our aristocracy this feature of physical conformation is certainly the rule. In the present age, when the thinker rather than the smiter has taken the lead, the pen is a more delicate instrument than the sword, and the habitual use of the first does not develop the muscles like that of the second. Your thinkers and writers, and those who have little occasion to employ themselves in the laborious occupations of life, will, as a rule, be a smaller-handed race than your fighters and labourers. Here, for instance, is the hand of an in-

telligent man, a philosopher, whose work is all of a mental character.

Observe the regularity of its form, and the harmony of its lines. The disengagement of the thumb permits of its opposition

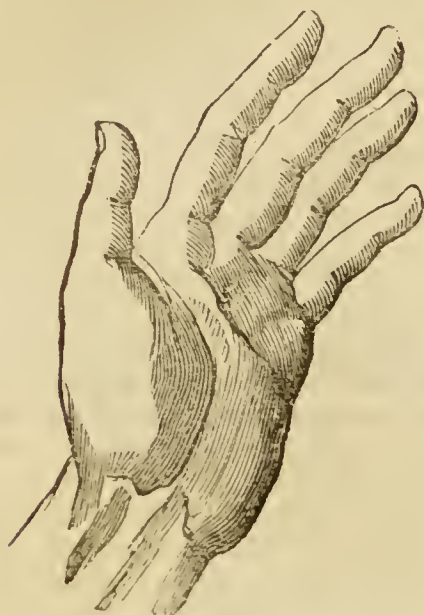


Fig. 1.

to all the fingers; it runs in length to nearly the second joint of the forefinger. Extended, the fingers are all of different lengths, but close them upon the palm, or some round object, such as a cricket-ball, and they will appear equal. Thus the instrument is fitted for handling all tools and implements which human intelligence has moulded, but especially the finer and more delicate ones. It is, in sooth, a perfect piece of mechanism, and a beautiful object to look upon; the skin is fair and smooth, and there are but few lines in the palm; like the superior intelligence to which it pertains, it is neither empty nor broken.



Fig. 2

Now observe the next; it is the hand of an idiot. See how thick and clumsy is the form, and how deep the lines marked in it; the thumb cannot be extended far, in consequence of the callosities of the muscles: as incapable of grasping any object closely and firmly, especially if it be a fine object, as the brain of the idiot is of sustaining an idea.

We take, as our next illustration, the hand



Fig. 3

of a confirmed lunatic. In general conformation much like the last, it is covered with confused and irregular lines, which cross each other in every direction, like the vagaries of a diseased imagination. The clumsy thickness of the hand in both these last cases is very noticeable; it is like the blunted perceptions and faculties of the mind. The hand of a monomaniac, again, exhibits a striking similarity in outward



Fig. 4

conformation and general character to the two last instances.

In this case, the intelligence is not altogether obscured; but every faculty of the mind is concentrated upon one single object. The hand, we see, is traversed by one deep line—like the predominating idea—to which the fingers are as it were involuntarily reflected, as all the mental faculties turn to the subject of the mania. Here, however, we see none of the clumsy thickness on which we remarked in the former case. There is more delicacy of conformation, so, too, there is more acuteness of intellect; but the hand, like the mind, is abnormal and incomplete; both thumb and little finger is too short.

One who has speculated deeply upon this curious subject remarks that, "As nature has marked the intellectual gradations from the intelligent man to the idiot, so has she established, in the conformation of the hands of all men, infinite shades of distinction, which faithfully represent the innumerable shades of mental energy that distinguish the characters of mankind one from another. Between the first and second links of the animal chain—that is to say, between the intelligent man and the monkey tribe—nature has placed an intermediate race, whose forms resemble man, but whose savage instincts approach the inferior animals. This double similitude is portrayed in their hands: Here is a cast from the hand of a Bosjesman:—



Fig. 5.

Compare it with that of a Chimpanzee further on, and the hand of a highly intellectual man (fig. 1). In the hands of the Bosjesman and Chimpanzee the thumbs are shorter than in the hands of an intellectual man. Observe, they barely reach to the first joints of the fore finger, an invariable

sign of want of intelligence. The narrowness of these two hands also indicates an instinct of theft and rapine; yet the Bosjesman, being more nearly allied to the intelligent man than to the Chimpanzee, the hand of the former does not present the rude energy of the latter, constructed to climb the loftest trees of a tropical forest."



Fig 6.

We might follow out these speculations to a much greater extent, and show how the paws of those animals which use them as organs of prehension correspond in form with their habits, powers, and faculties; but all this would be apart from the main object of our work, from which it will perhaps be thought that we have already to some extent departed.

Quite in accordance, however, with this object, are the following remarks from the above-quoted authority, that "the intelligence, habits, instincts of all living creatures are not the only things portrayed in the organs of touch and prehension; the temperament and desires can also be read in them, and some physicians, from the form of the hand alone, can foretell consumption twenty years before the symptoms of disease appear in the lungs."

It must not be thought, from what is here said, that we believe with some professors of Chiromancy, that "all physiology, all psychology, and even pathology, is written in legible characters upon the human hand." We believe that it may sometimes serve as an index to mental characteristics, and also to states and conditions of the body; we know that it is often consulted by the physicians for other purposes than to ascertain whether the pulse be quick or slow, strong or weak; we know that a cold and clammy skin tells of a morbid condition of the excretions, and that a hot and dry one means fever; we know that the slender

and semi-transparent hand indicates delicacy of constitution, likely to result in pulmonary diseases; and we know that the round fat hand, with stumpy fingers, gives warning of apoplexy; but we do not know, and do not believe, that from the hand or the handwriting can anything like a certain judgment be formed of the character or state of health of a person, although, by means of either, a shrewd guess may often be made.

On the injuries to which the hand is liable we have not thought it necessary to dwell here much, as under the several heads of *Dislocations, Fractures, Wounds*, and some others, both the diseases and hurts likely to affect this part of the body are described. See also *Fingers, Knuckles, Wrist, &c.*

HANGING. It sometimes occurs that non-professional persons are called on to strive for the recovery of one who has attempted self-destruction by this means, and therefore it behoves us to give some simple directions as to how they can best act in such a case. The first thing, of course, is to cut down the body, and loosen the cord, or whatever it may be, about the neck; then, as unless the brain is relieved of the congestion of the blood caused by the pressure and consequent stoppage of the circulation, there will be no chance of a recovery, an effort should be made to open the temporal artery, which is most large and prominent on the side of the temple, nearly in a right line with the top of the ear; it may be done with a sharp penknife; cold water should also be dashed in the face; and, if blood flows freely, there is a chance that efforts to inflate the lungs by the same means as those recommended under the head of *Drowning* (which see), may be eventually successful. Persons will do well to make themselves acquainted with the exact situation of the main branches of the temporal artery, as there are several cases of emergency in which this knowledge is useful; it can be easily obtained by passing the hand over their own temples, and feeling where it beats. In suspended animation from drowning, hanging, or suffocation, the exact situation of the artery cannot be ascertained in this way, as of course there is no pulsation.

HARE LIP (Latin, *leporina*). A congenital cleft or division of the lip, so called from its fancied resemblance to the divided lip of the hare. This is a malformation by no means uncommon in infants, who have the upper lip cleft at the furrow to a greater or less extent, the fissure sometimes extending through the roof of the mouth: it seems to arise from a defective union of the

two halves of the body in the uterus. The fissure is generally single, that is on one side only of the central projection of the upper lip, but sometimes it is double, occurring on both sides, and in that case there is generally a want of some portions of the bony structure, including the central teeth of the upper jaw, there being probably nothing between the slits but a ridge of cartilage.

This is a surgical case for which no domestic treatment will avail, and the mother should not hesitate to have the necessary operation performed, in order that her child may avoid a permanent disfiguration: it is nearly always successful, if properly performed, and requires no great amount of skill in the operator; it consists, in single Hare-lip, in paring off, by means of a sharp curved knife, termed a bistoury, the edge of the divided lip on each side, taking care to remove all the hard skin, and then bringing the two new surfaces together so as to close up the cleft, and fixing them so by means of a couple of ligatures passed through the lip, or around the projecting ends of pins inserted in the lip. Considerable loss of blood often attends this operation, owing to the severance of the labial artery, but the ligature at the angles of the lip can be applied as to compress it and stop the bleeding. The blood should not be wiped off, but allowed to clot over the wound. The operation for double Hare-lip is more complicated and sometimes involves nice mechanical contrivance, into the particulars of which we need not enter. The operation for Hare-lip ought never to be performed prior to the period of dentition, and as a general rule the child should not be less than two years of age; and great care must be taken to keep its hands from the lip until the adhesion has taken place and the process of healing well advanced, as any displacement of the parts will occasion much trouble to the surgeon, and entail additional suffering on the child. See *Lips*.

HARMONY (Greek *armonia*, a close joining). A kind of immoveable articulation of the bones, in which they fit closely together, like the pieces of the skull. See *Joints, Synarthrosis*.

HARROWGATE WATERS. These are of various kinds; some being pure chalybeates or weakly aperients, and others sulphuretted salines; the latter are the most useful and celebrated for the cure of cutaneous diseases, such as lepra, herpes, psoriasis; they are also beneficial in scrofula, scurvy, syphilis and piles, and for the relief of systems suffering under excess of the bile; their beneficial action is owing in a great measure

to the presence of sulphuretted hydrogen, which acts as an excitant. In inflammatory diseases, and where there is a tendency to local congestion, these waters should not be administered without aperients, and then their action should be carefully watched. In skin diseases they are used both externally and internally.

HARTFELL WATER. This is the water of a chalybeate spring near Moffat, in Scotland; its most active ingredient is Sulphate of Iron.

HARTSHORN. A popular name for the Liquor of Ammonia, which was first procured from the horns of deer, but afterwards from bones and other animal matter; in the Pharmacopœia it is termed *Spiritus Cornu Cervi*, Spirit of the Horns of Deer. (See *Ammonia*.)

Black Hartshorn (*Cornu Ustum Nigrum*), is the impure residuum left in distilling horns for the spirit.

Red Hartshorn is a term sometimes applied to Lavender Drops. *Spiritus Lavendulæ Compositus*. (See *Lavender*.)

Hartshorn Shavings are sometimes boiled down to make a jelly, similar to that yielded by calves' feet and cow-heel; equal parts of this and cow's milk are recommended for children brought up by hand; it is a good nutrient, and may be added to the coffee, milk, &c., given to consumptive and otherwise debilitated patients.

HARVEST BUG. This is a variety of the Tick, called by naturalists *Acarus autumnalis*. It penetrates the skin of those who frequent the harvest fields, and causes intolerable itching, which is succeeded by shining ridges or weals, hence it is sometimes called *Weal-worm*. The best application is a lotion composed as follows:—Extract of Goulard, $\frac{1}{2}$ an ounce; Diluted Acetic Acid, $\frac{1}{2}$ an ounce; Rose, Elder Flower, or Distilled Water, $\frac{1}{2}$ a pint. Wet rags to be kept applied. A little cooling aperient medicine should be taken to keep down any tendency to inflammation. If the pimples are pricked with a needle, the bug, which resembles a small red spider, may generally be extracted.

HASTY PUDDING. We give two receipts for making this (with some persons) favourite household dish:—Into a pint of boiling milk stir about a tablespoonful of flour, previously rubbed down with a little cold milk; sweeten with sugar, and serve hot: a little nutmeg may be added, if agreeable, or a few currants. For a baked pudding:—Into a pint of cold milk stir half a pound of flour, and boil, stirring it the while; let it stand until cold, then add two eggs pre-

viously beaten up; mix well with some sugar to sweeten, and any desirable spice, and put into cups and bake. These are good nourishing puddings, and not expensive; but they are too heavy for persons with weak digestive organs.

HAUSTUS (Latin *haurio*, to draw). A Draught. This is a quantity frequently ordered in prescriptions; it answers to three tablespoonful, or $1\frac{1}{2}$ ounces, or about three-quarters of a common wine glass. See *Apothecaries' Measures*.

HAWS. The well known red berries which adorn our hedges in the autumn, being the fruit of a species of *Cratægus*, belonging to the natural order *Pomaceæ*. It has several popular names, such as *Haw* or



Whitethorn, and *Service Tree*. The berries yield, by fermentation, an acidulous drink, which is pleasant and cooling, but not otherwise medicinal.

HAY-ASTHMA. Also called *Hay-Fever*, or *Summer Bronchitis*, is a disease which occurs about the time of the hay harvest, and appears to be caused by the pollen of some wild plants getting into and inflaming the bronchial passages. This theory is supported by the fact that those who live in situations where there is little or no vegetation do not suffer from it. A difficulty of breathing, and a burning sensation in the throat, are the chief characteristics of this affection, on which no remedies seem to exercise a curative effect; a removal to a different locality is most effectual.

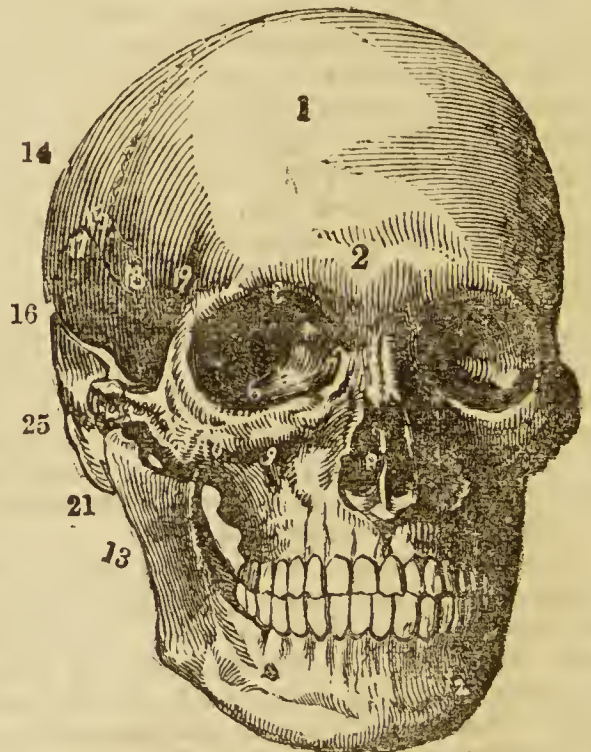
HAZEL. The *Corylus Avellana*, or *Nut*

Tree, the typical plant of the natural order *Corylaceæ*, or *Cupuliferæ* as it is sometimes called. A cultivated variety of this species is the *Filbert* (which see).

HEAD. This is the upper or crowning part of the human frame, which is divided by anatomists into three principal divisions; the Head, the Trunk, and the Extremities: it is with the first only that we have to do at present, with regard to the anatomical structure of which we may say, that it consists of the Skull, or Cranium, and the Face; the former being, as it were, a case for the brain; it is composed of eight bones, connected together by sutures, or joinings, some having toothed or serrated margins, which fit into each other, some overlapping, and others interlacing; a structure marvellous at once for its strength and lightness. Between the interior and exterior wall of the frontal or forehead bone are what are called the frontal sinuses, two hollow chambers, which cause those bulgings above the upper edges of the orbits; and in the hollows beneath them, lie, sheltered and protected, the eyes. Behind each ear there is also a bony prominence to which the powerful muscles are affixed, which are distinctly seen in the neck, whose lower ends are fixed to the top of the breast bones; these latter appear intended to guard the entrance to the internal ear, which is placed wholly within the hollow of the temporal bones. At the base of the skull is a round hole of considerable size, through which the spinal cord, or marrow, passes from the vertebræ to the brain. On either side of this hole are two smooth prominences, called condyles which rest upon the tops of the uppermost vertebræ, and allow of a nodding motion to the head. Owing to the frequent modification by confluence, or joining together, of the human bones, it is difficult at all times to specify the exact number in any given part, and this is more especially the case in that part which we are now considering: collections of bones so united have received a kind of generic name, thus we say the *occipital*, the *temporal* bones, &c., and the constituents of these which have received no specific name, are defined as *processes*: thus we have the condyloid process of the occipital, and the styloid process of the temporal bone; we also sometimes speak of these aggregates of united bones as *portions*, for example the petrous portion of the temporal bones, &c. The classification, moreover, of the bones of the human Head, which some anatomists make into those of the cranium, and those of the face, is artificial, or special, and con-

sequently defective. Many bones which essentially belong to the skull, are wholly omitted, in such an arrangement. Under the term *Skull* will be found a more minute account of the bones composing it; at present we will devote our attention more particularly to the general conformation of the Head, and its frontal developement or Face. When we come to speak of *Phrenology*, we shall treat more fully of the *form* and *size*, as indicative of character. *Teeth* too, will form a separate subject for discussion; of the *Brain* we have already spoken, and also of the *Eye* and the *Ear*; so that the ground before us is very much cleared, and the matter for immediate discourse simplified.

Of the Head, then, that lofty dome in which thought sits enthroned; the capital of the beautifully and marvellously constructed pillar which God has set up in the temple of his divinity, and illumined with the light of spiritual life and intelligence! Of the Head, the seat of sensation, and the home of intellect, we have to speak, but not so much in relation to its psychology, as its physiology. We have seen that the upper portion of it is the cranium, or brain-case, into whose delicate membranes and tissues, and reticulated net-work of nerves, and veins, and arterics, we have already penetrated. Let us therefore now confine our attention to the outside of the bony structure here represented.



This is the anterior or front view of the Head, as shown in the human skeleton. No. 1, is the frontal portion of the frontal bone; 2, marks the position of the nasal promi-

nence, the hollow within which is shown, the cartilage which supports and forms the nose being mostly removed; 3, over the orbit refers to the supra-orbital ridge; 4 is the optic foramen; 5 and 6, the sphenoidal and the sphenomaxillary fissures; 7, lachrymal fossa in the lachrymal bone, where the nasal duct commences; 4, 5, 6, and 7 refer to parts within the orbit; 8 is the opening of the anterior nares, divided into two parts by the vomer, on which the cypher is placed; 9 is the infra-orbital foramen; 10, malar bone; 11, symphysis of lower jaw; 12, mental foramen; 13, ramus of lower jaw; 14, parietal bone; 15, coronal suture; 16, temporal bone; 17, squamous suture; 18, upper part of the great ala of the sphenoid bone; 19, commencement of the temporal ridge; 20, zygoma of the temporal bone, assisting to form the zygomatic arch; 21, mastoid process. It is thus that the anatomist Wilson describes and figures the front view of the Head, and in this case, as in many others throughout the work, we have given the scientific names of the various parts, because we are desirous that our readers should have an opportunity of becoming acquainted with these anatomical terms if they wished to do so. In all cases where the meaning of each is not appended, it will be found under the head occupied by the word in the alphabetical arrangement. In many cases, too, there is no other than the scientific name to give.

Here, then, we have the skull, that chamber of the soul, as it has been well termed, and of which more will be said under its proper head, presented to us as it was to *Hamlet*, when he exclaimed, "Alas, poor Yorick!" and moralised upon the fine intelligence that once dwelt in those now tenantless cavities. Who can look upon the broad expanse of the forehead without thinking of the busy brain which once thrilled, and throbbed, and vibrated to every sensation of the body, or emotion of the mind?—at those hollow orbits from which once flashed forth the light of intellect, the fire of anger, or beamed the gentle look of love and affection; and at which entered the luminous rays, bearing visions of the outer world to the inquiring soul within?—at the broken remains of that once finely chiselled and shapely organ, which once adorned the face, and stood like a vestibule to the great hall of the temple, through which perfumes, like messengers, were ever passing, as ministers of delight, or warners of danger; at those rows of gleaming teeth, without thinking of the friendly smile, and the ruby lips which once

half hid and half displayed them, and contrasted so beautifully with their pearly whiteness? Where, now, is that organ of speech which once discoursed so eloquently, counselled so wisely, or admonished so kindly and affectionately? But we must not pause over such reflections as these. Let us clothe the naked skull, fill up the vacant spaces, and view the Head as we see it daily around us—as it is with toiling, rejoicing, sorrowing men, clothed and covered with skin and hair, provided with organs of most beautiful and complicated structure, and, like those of the rest of the body, well adapted to answer the necessary purpose of man's duplex nature—bodily and spiritual.

Without going at all deeply into the subject of the general formation of the Head as distinctive of race, or indicative of character, we may here make a few brief observations calculated, as we hope, to elucidate our present subject. There are three great groups of mankind which are especially distinguished by the shape of the Head. In the first group are included, as the celebrated ethnologist, Dr. Pritchard, tells us, all the people who are met with in the countries from the Himalayan mountains to the Indian Ocean, comprising all Hindostan, the Deccan, Persia, and Arabia. It also includes the countries of the north of Africa and the whole of Europe. The characteristics of this group are the *symmetrical* or *oval* form of the head, as here shown.



Here we see that the skull has projecting parietal bones, so that the head is rounder than in others. The upper jaw bones, and the zygomatic arches, are so placed in relation to each other, as to give the face an oval form. In these heads the forehead projects, and is on the same plane as the bones in the face, or, at any rate, there is



no obvious projection of the lower parts of the face; the facial angle, as it is called, being greater in this group than in the others. There is no lateral or outward projection of the cheek bones; and the teeth are so placed in the upper and lower jaws, as to be almost perpendicular. In this group, the countenance is distinguished by smoothness and regularity of features, and an absence of prominence in any one part disproportionate to the other. The lips are small and compressed; the chin is full and prominent; and the whole face is of a regular oval form. It is amongst Europeans that this form of Head is met with in its most perfect development; and the ancient Greeks in their sculpture, have realized its most perfect form. Such heads, however, do not exist only in sculpture, as living specimens are constantly met with, equalling, in their proportions, those of the Greek artists; and Blumenbach has described a skull in his possession, which in its structure he regarded as being as perfect as any to be found among Greek statues. The face given as an example of this group, that of an Abyssinian, does not represent the most perfect type. In the second group,

which includes the Negroes, the *Alfourous*, the Papuans, the New Zealanders, and Australians; we have the Head *narrow and elongated*.

When these heads are examined, they give the idea of having been compressed on each side. The zygomatic processes do not project laterally, but forwards. The cheek-bones and upper jaw project forward, not outward; and the teeth are not vertical, having an oblique direction in the jaws. The facial angle has its lowest development in this form of Head; the countenance is the least pleasant of that of any group. The projection of the bones constituting the lower parts of the face gives to the expression an animal and somewhat ferocious character. The forehead also retires in these races; the lips are thick and protruding; the nose is not proportionably developed, the upper part being compressed, and the nostrils wide and expanded. Such are some of the features which belong to the narrow and elongated Heads—by common consent the least beautiful form of any belonging to the human race. Our representative of this group is an Australian.

The third variety of Heads is called the *square, broad-faced, or pyramidal*; it is shaped like the last, as far as the back of it is concerned; but it differs in the excessive outward tendency of the bones of the face,



which appears to form the base of a cone or pyramid. This Head is characteristic of the Mongolian race (one of which we give as an example). It embraces the Esquimaux, the

Aborigines of America, the Hottentots, the Finnish nations of Europe, the Chinese, the Indo-Chinese, the Tungusians, Japanese, part of the Tartar races, and others of the Northern Asiatic nations. The peculiarities of this kind of Head are caused by the projection of the zygomatic processes and cheek-bones on each side, giving great breadth to the face. The sockets of the eyes are generally large and deep; whilst the bones of the nose, and the space between the eye-brows, are on a level with the bones of the cheek. The countenances altogether differ from those of the second group, in projecting less, and in their greater width from one cheek to the other. Here we observe a curious obliquity of the eye, quite peculiar to this form of Head; the nose is depressed; the lips are not so large as in the second class, nor compressed, as in the first; the chin is shorter than in either.

Injuries to the Head. These we shall briefly consider, not so much as affecting the brain, which has already been spoken of, but as affecting the parts which enclose the brain, or lie immediately contiguous to it; and to these, in most cases, but a passing allusion will be required, with a reference to the heads under which they are more fully described. Among the most common of these injuries are bruises and superficial wounds of the *Scalp* (which see). Sometimes, in the former, a vessel may burst without the outer skin being broken; and the consequence will probably be a copious effusion of blood, which raises up the scalp from the skull, and feels, at first, like a fluctuating tumour; the whole upper part of the Head swelling rapidly. Scarcely anything is required, in this case, but cold lotions to the Head; the blood will probably be absorbed, and there will be no necessity for an incision to let it out. Sometimes, however, when the vessels of the dura mater are ruptured by a jar, and blood accumulates between it and the skull, it threatens compression of the brain; in this case, the patient should be bled freely, if his system will bear it, and, if this does not mitigate, the symptoms, it is best to apply the trephine, wherever blood is likely to be found in the Head, and let it escape.

If instead of blood, purulent matter collects between the dura mater and the skull, it is likely to lead to equally fatal results. In this case there is headache, restlessness, and extreme langour; the patient cannot sleep, he has a quick hard pulse, and if the symptoms are not quickly relieved, convulsions, delirium, insensibility, and probably paralysis is likely to ensue, and, finally,

death. The treatment here must be the same as in the former case; trepanning, to make a way for the escape of the pus; an avoidance of stimulants, which might produce inflammation, before the operation; a generous dietary to support the system.

Superficial wounds in the Head merely require the hair to be cut or shaved off, and the edges of the wound brought together by means of sticking plaister, and the part kept cool by layers of lint, dipped in cold water and placed over it. A not uncommon consequence of deeper wounds in the head, and especially punctured ones, is inflammation, and consequent suppuration, in the loose tissue that connects the tendon of the muscle with the pericranium; when this is suspected to be coming on, apply leeches in large numbers about the wound, and cold lotions; when matter is formed, make free incisions to let it out, and treat the same as any other abscess. A frequent result of injuries of the scalp is *Erysipelas* of the whole head and face (see that subject).

HEADACHE. There is no more common complaint than this, which is symptomatic of so many different diseases, that it is impossible to lay down any general system of treatment; we will, therefore, proceed to enumerate some of the chief kinds of Headache; and, as we do so, make some allusion to *symptoms* and *remedies*.

We place first *Bilious*, or *Sick Headache*, because it is perhaps the most common of any. It generally comes on the first thing in the morning, and may often be relieved by a hot cup of strong tea or coffee; probably because this stimulates the digestive organs, from a defective action of which the pain proceeds. This pain commences usually at one side of the head, most likely on the brow, just over the right or left eye, but when it continues it is diffused over the whole head, and is accompanied by an intolerable feeling of sickness, often by vomiting, and extreme langour and depression of spirits; there is generally, also, singing in the ears, dimness of sight, and confusion of mind, with great restlessness. Sometimes, without any medicine being taken, the bowels, which have been previously constipated, will be freely evacuated, and the most urgent symptoms are quickly relieved; but it is generally desirable to take some active aperient, preceeding, or accompanying it, with a mercurial: a 5 grain Blue Pill at bed time, and a Black Draught in the morning, will generally prove effectual, especially if the diet is spare and simple; take no solid food for 24 hours, only a cup or two of tea, or a little thin gruel, and the chances are that there

will be no Headache the next day ; although it will probably return as severe as ever in a few weeks, its recurrence in some cases being at almost regular periods. It can generally be traced to some error in diet, such as taking food that is indigestible, or in too large quantities ; or stimulating drinks, with insufficient exercise. Very often it arises from some derangement of the biliary secretions, either as to quantity or quality, or defective assimilation ; sometimes from the habitual abuse of purgatives, which enfeebles the tone of the alimentary canal. "Under these latter circumstances it is," as Dr. Elliott observes, "a most intractable complaint." Very commonly a simple dose of Rhubarb and Magnesia, with about 30 drops of Sal-Volatile, will remove a common Sick Headache ; but when there is nausea, and vomiting or purging does not come spontaneously to remove it, the former should be excited by an emetic, composed of 1 grain of Tartarized Antimony and 20 of Ipecacuanha, and after this has acted, a Rhubarb and Blue Pill. Persons subject to this kind of Headache, should carefully abstain from fat meats, pastry, butter, and rich food generally. See *Bile*.

That which we have just been describing is one of the forms of *Sympathetic Headache*, sympathy with a disordered stomach being the immediate cause ; sometimes an excess of alkali, at others of acid in the alimentary canal will produce this : in the former case, a vegetable acid, such as Vinegar, will afford relief ; in the latter case, in which there is likely to be heartburn and acid eructations, a dose of Sal Volatile, or of Carbonate of Soda, or Potash, will be the best remedy. In all these cases, it seems likely that the blood circulating in the brain is both mechanically and chemically affected by the defective action of the assimilative and secretive organs of the stomach. We sometimes find that the postponement of the customary evacuation of the bowels, for ever so short a time, will cause a Sympathetic Headache, and that this will be relieved directly the evacuation has taken place ; a clear proof of the intimate connection there is between the head and the stomach.

We may next speak of a class which may be called *Congestive Headaches*, because they proceed from a congested state of the vessels of the brain ; arising either from an overfulness of blood, or a weakness of the organ, or from an excessive nervous irritability, which frequently upsets the balance of the circulation. Whichever of these may be the case, there is nearly always a dull pain over the whole of the head, which is worst

at the fore and hind parts. When it arises from an over-loaded condition of the vessels, there is usually a bloated countenance, with full red eyes, and a dull inanimate expression ; here we find, on inquiry, a sluggish liver, and inflammation of the brain, tending to apoplexy or paralysis.

Leeches to the temples, or cupping on the back of the neck ; cold applications to the head, with spare diet, mercurials and active aperients, will be the proper treatment. (See *Brain, Congestion*).

A weak brain is generally a consequence of some long standing discharge which has debilitated the whole system, and in this condition of things, if from any cause there is a more than common flow of blood to the brain, there will be Head-ache, with a pale, sallow countenance, and a languid pulse ; frequently swelled feet, excessive fatigue on the slightest exertion, with palpitation of the heart, and increase of the pain in the head. Here measures of depletion would be improper ; we must soothe and sustain by means of sedatives and tonics, such as Conium and Quinine, either in the form of pills or mixture, as follows :—Take of Extract of Conium, 24 grains ; Sulphate of Quinine, 12 grains ; make into 12 pills, and give 1 three times a-day : or Sulphate of Quinine, 12 grains ; Sulphuric Acid, diluted, 12 minims ; Tincture of Conium, 2 drachms ; Infusion of Gentian, 6 ounces ; take a table-spoonful three times a-day. Good nourishing food will be required in this case, and stimulants, such as Ale and Wine, in moderation. Where the Head-ache proceeds from nervous irritability, the mode of treatment must also be soothing and strengthening ; but in this case we must avoid stimulants as much as possible ; tonics are best here, with plenty of fresh air and exercise, and all that tends to invigorate the frame. A course of hydropathic treatment will generally be found effectual. (See *Debility, Hydropathy*).

Rheumatic Head-ache is commonly caused by exposure to cold, especially a draught of air ; the pain is chiefly confined to the back and front of the head, and is felt most at night when the patient is warm in bed : it is a remittent, shifting pain, shooting from point to point, following the downward course of the jaw, whose muscles are commonly implicated ; (for treatment see *Rheumatism*).

Periodic Head-ache, Brow-ache, Brow-ague, or Neuralgia of the Head, as it is variously called, is an intermitting pain, which comes on at periods more or less regular, and is confined to the brow. It will

nearly always yield to full doses of Quinine, especially if combined with Conium. (See *Brow-ague, Hemisrania, Neuralgia*).

Organic Head-ache, resulting from actual disease of the Head itself, is rare, and when it does occur, only a palliative mode of treatment can be adopted: sedatives, such as Opium and Conium may, for a time, relieve the almost intolerable anguish, but they will not touch the disease itself.

We have now adverted to the *Bilious* or *Sick Head-ache*, sometimes called the *Sympathetic* or *Dyspeptic*; also to the *Congestive*, the *Rheumatic*, the *Periodic*, and the *Organic Head-aches*, these being the principal classes into which *Cephalagia*, as it is sometimes called, can be divided. Let us in conclusion enumerate the distinct and specific causes to which pain in the Head may be assigned:—Rheumatic Inflammation of the Pericranium, or of the Mucous Membrane of the Frontal Sinus; Mental excitement; Strong or long continued impressions upon the senses of Hearing, Sight, or Smell; Excessive Impetus of Blood to the Head; Impeded return of the same; Congestion or Inflammation of the Brain; Suppression of Bile, Perspiration, Urine, &c.; Organic Disease of the Head; Sympathy with the Stomach, and Constipation; Frequent use of Narcotics or Stimulants; Intestinal Worms; Changes in the Atmosphere, and Neuralgia.

HEALTH. This is a word of Saxon origin, signifying, as our readers are aware, freedom from bodily pain or sickness. This is a blessing which few enjoy in an unimpaired state, in this highly artificial condition of things; and when we say that a person is healthy, we must be understood to mean comparatively rather than positively so. Latterly the term *normal* has been much used in scientific writings to signify a natural or good state of Health; but in this signification we might as well keep to the good old Saxon term, *helth*, which is but another form of *heal*, as it expresses the same thing equally well, indeed better.

“Though health may be enjoyed without gratitude, it cannot be sported with without loss, nor regained by courage,” says a great writer; and truly it were well if men kept this saying in mind, for there is scarcely any earthly blessing they hold so lightly, nor deplore so deeply the loss of. What, we may ask, is a state of perfect Health? If a man eat well, and sleep well, and perform his allotted duties with ease and comfort; if there is a proper performance of all his bodily functions, so that he is not made aware by any unpleasant sensation or pain,

or feeling of languor and debility, that matters within him are not as they should be; if his step is light, and his laugh sonorous and hearty, and his manners easy and cheerful, and he makes no complaint of the changes of the weather, and so forth, we should pronounce him a healthy man, and be ready to insure his life for any amount. But who can tell what latent diseases, what hereditary predispositions, are lurking within, waiting for some exciting cause to call them into activity? How often do we see the man of apparently robust health struck down by some accident or morbid influence, so often, as to convince us that our tenure of Health is, indeed, very uncertain; and to induce us, if we be wise, duly to value and to care for such an inestimable blessing. Few there are, however, who do this; therefore is there a constant and ever increasing demand for the services of medical men, and therefore are such works as we are now writing, books of universal utility and constant reference. It is not our purpose here to enter at all into the physiology of Health and Disease; we have already spoken on the latter subject under its proper head, and the whole scope and tendency of all that we have written in these pages is for the preservation of the first, and the avoidance or cure of the last. Wholesome diet, moderately enjoyed, personal cleanliness, regular exercise, pure air, and an avoidance of undue mental excitement and bodily excesses—these are the grand preservatives of Health. Inherited diseases cannot be guarded against, nor can accidents, nor the contraction of contagious or infectious diseases—these are the bodily ills to which the flesh is certainly heir, but these form a very small proportion of the ills that do afflict humanity; and it is a reproach alike to the common sense and the religious character of this so-called enlightened age that Health should be squandered as it is. If we really wish, as we pray, to have “a sound mind in a sound body,” let us strive to preserve the body sound when we have it so; for, without it, the mind is scarcely likely to be really healthful.

HEARING. This word has probably a Saxon origin, although we trace something like it in the Greek *horeo*; it signifies the faculty or sense by which sound is perceived; it is reckoned among our external senses, its particular organ being the *Ear*; in our article on which we have explained how certain motions or vibrations of the air, striking upon the tympanum, or drum, so excite the auditory nerve, whose fine reticulations, or

febrillæ are spread over the interior of the organs, as to cause them to communicate to the brain, a sensation by which the mind obtains the ideas awakened by the sounds. All this is very wonderful, and past human comprehension; we know that it is so, but we cannot tell how this communication between mind and matter can take place; we see the machinery of the organs, and we are cognizant by certain results of its being put into operation. We know that if we utter certain words in the ear of a friend or a foe, the thoughts or ideas which we intended those words should convey, are conveyed to his mind, and he speaks and acts accordingly; but our chain of reasoning upon cause and effect wants some links to make it complete. We are sure that we do *hear* and are *heard*, but we cannot tell *how* this hearing is effected. It is one of the mysteries of our being, and there are many such to teach us humility and our dependence upon God. For remarks on the causes of the deprivation of Hearing and the means of its recovery. See *Deafness, Diseases of the Ear*.

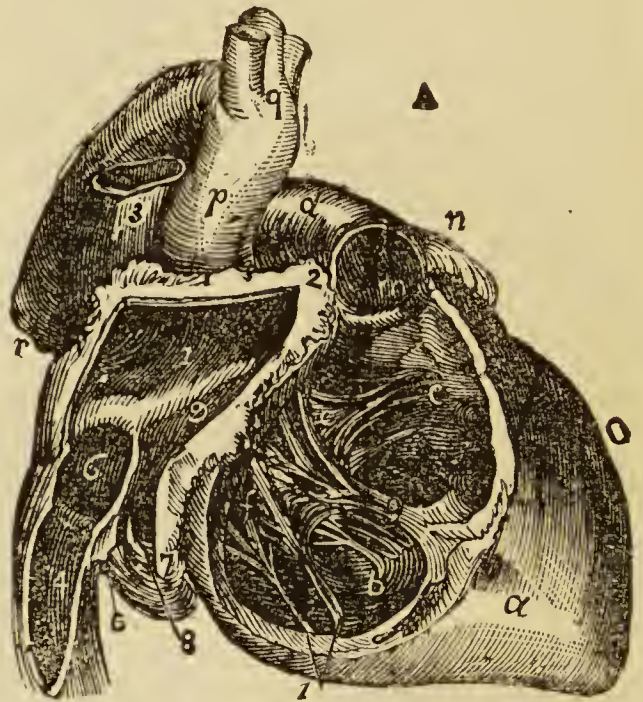
HEART (Latin, *cor, cordis*). This is the great central organ of circulation; its form is that of an irregular cone, having its base directed backward towards the spine, and its point forward and downward towards the left side; so that at each contraction it may be felt striking between the fifth and sixth ribs, about four inches from the medium line. In this position it rests upon the diaphragm, having the surface on which it lies much flattened. On its right side, it is firmly attached to the diaphragm, which, it should be remembered, is the muscular partition between the chest and abdomen; and behind, by the *vena cava*, or trunk vein which passes through the diaphragm. Behind and above, the Heart is also attached, although somewhat loosely, to the upper and back part of the chest, by the vessels which there pass out of the pericardium, or membranous bag in which the Heart is perfectly enclosed, although it is sufficiently loose to allow of free motion. In a healthy state, the pericardium is lined with what is called the serous membrane, which is smooth and moist, and constitutes its inner coat or layer, the outer one being fibrous; this membrane is also reflected, so as to give the Heart two coverings, which, at every motion of the organ, glide smoothly over each other, and thus prevent friction.

The Heart may be popularly described as a hollow muscle, having four cavities, two on each side; its action is that of a kind of double pump, intended to carry on the two-

fold circulation, viz., through the body, and through the lungs; the auricle and ventricle, on the left side, being devoted to the former, and those on the right to the latter. Between the cavities on one side, and those on the other, there is no natural communication, but each auricle is connected with its corresponding ventricle, by a valve which only opens by pressure on one side, so that the blood cannot pass except in the right direction; any attempt to return being instantly resisted by the closing of the bag-like valves; should these become diseased, so that they perform their office imperfectly, there will be regurgitation, or passing back of the blood, and that occasions serious derangement of the balance of circulation, resulting in organic disease. These valves, which are also placed where the blood vessels enter the different cavities of the Heart, consist of membranous folds, and are, according to their form, either *sigmoid* or *semilunar*. (See *Valves*).

The regurgitation of blood into the lungs, or other parts of the body, is not an unfrequent cause of *Hæmorrhage* or *Dropsy* (which see).

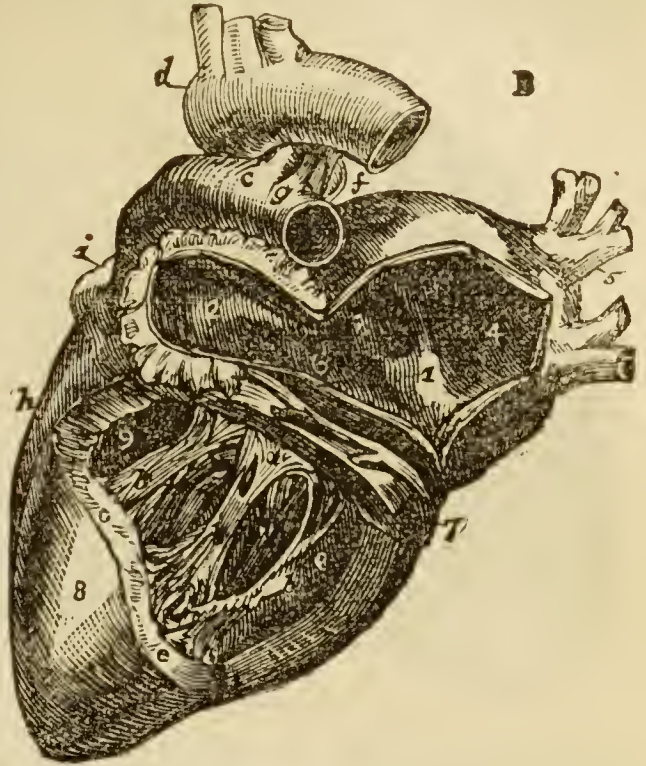
We would now invite the attention of our



readers to a couple of diagrams, in which are exhibited the anatomy of the Heart. like many others, in this book, they are from Wilson, than whom we can cite no better authority. Diagram A, represents the anatomy of the right side:—1 is the cavity of the right auricle, with a smaller hollow, called the *Appendix auriculæ* (2), in which is seen the *Musculi pectinati*, which are small muscular columns, arranged in parallel lines, some-

thing like the teeth of a comb, and are thence called pectinated, or toothed; 3, is the superior portion of the *vena cava*, which returns the blood from the upper half of the body, and opens into the upper and back part of the auricle; 4 is the inferior part of the *vena cava*, by which the blood from the lower half of the body is returned, and this opens into the auricle, through the lower and hinder wall; 5 is the *fossa ovalis*, an oval depression, surrounded by a prominent ridge, called the *annulus ovalis*, this is the rounded margin of the septum, and occupies the place of the *foramen ovale*, which formed the communication between the right and left auricle in the foetus; 6 is the *Eustachian valve*, which is also a part of the apparatus of foetal circulation, but in the adult is a mere vestige and fragment; 7 is the opening of the *Coronary vein*, across the mouth of which is stretched the *Coronary valve* (8), which prevents the reflux of blood in the veins during the contraction of the auricle; the *Coronary*, or, as they are sometimes called, *Cardiac veins*, return the blood from the substance of the Heart itself; 9 marks the opening, or valve, between the auricle and ventricle; and between 1 and 9 are to be seen two or three *Foramina Thebesii*, which are minute, pore-like openings of small veins, which open directly from the muscular structure of the Heart, without entering into the venous current at all. Now, to distinguish the internal from the external portion of the Heart, we will use letters for the other references:—*a* then, is the right ventricle, whose cavity is marked by *b c*, on the walls of which are bundles of muscles called *Columnæ carneæ*; *c* marks the channel leading to the pulmonary artery (*d*); and *e f* is the *Tricuspid valve*, *e* being placed on the anterior curtain, *f* on the right curtain; *g* is the long *Columna carneæ*, to the apex of which the anterior and right curtains are connected by the *Chordæ tendineæ*, or tendonous strings which connect the *Carneæ columnæ* of the Heart with the auricular valves; *h* is the long moderator band, and *i*, the *Columnæ carneæ* of the right curtain; *k* is the attachment by *Chordæ tendineæ* to the left limb of the anterior curtains; and *l l*, the same tendons of the fixed curtain of the valve; *m* is the valve of the pulmonary artery, through which, and the aorta, the whole arterial system is fed; *n* is the apex of the left *Appendix auriculæ*; *o*, left ventricle; *p*, the ascending aorta; *q*, its transverse portion, with the three arterial trunks which run from the heart; *r* is the descending aorta.

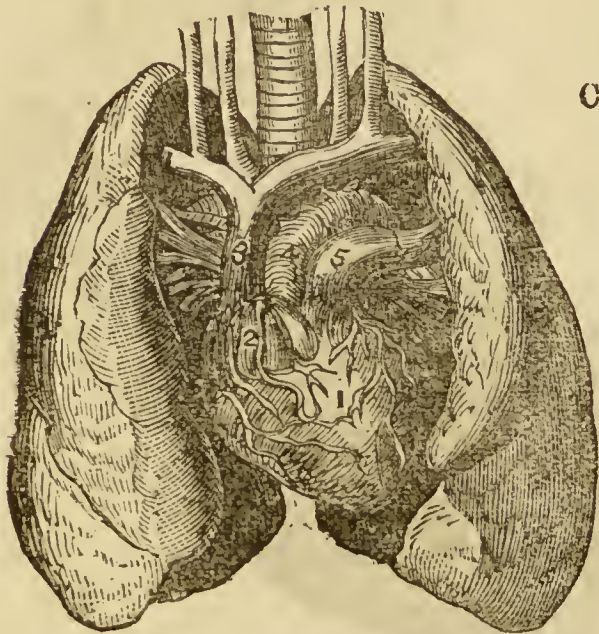
In diagram B we have the anatomy of the right side exhibited: fig. 1 is the cavity of



the left auricle, and 2 that of the *Appendix auriculæ*, near the apex of which are seen the *Musculi pectinati*; 3 is the common opening of the two right pulmonary veins; 4, the sinus, into which the left pulmonary veins open; these veins are marked by 5; and the valvular communication between the left auricle and ventricle by 6; the coronary vein, lying in the groove of this opening, is 7; and 8 is the left ventricle, whose cavity is 9. Then, of the letters, *a* points out the position of the mitral valve, so called from its resemblance to a mitre; *b b*, *Columnæ carneæ*; *c c*, the same fixed, and forming part of the internal surface of the ventricle; *d*, arch of the aorta, from the summit of which the three arterial trunks of the head and upper extremities arise; *e*, pulmonary artery; *f*, obliterated *Ductus arteriosus*, another fragment of foetal circulation; *g*, left pulmonary artery; *h*, right ventricle; *i*, point of the appendix of right auricle.

It will, perhaps, conduce to the better understanding of all this if we enter a little more fully into explanation, and give another diagram (C), which exhibits the Heart more in its relations to the surrounding parts. Let it be understood that the two large lobes on either side are the lungs; 1 is the Heart itself; receiving into its right auricle (2) the blood from the *Vena cava* (3): this is the *venous circulation*, which has gone through the system, and is on its way back to the lungs to be reoxygenized; opposite to

this, or on the left side, is the left auricle, into which the purified blood passes through the ventricle, and is pumped out into the aorta



(4) and pulmonary artery (5); these are the main channels of the *arterial* circulation. The contraction of the auricle to force out the blood is called *systole*, and that of the ventricle *diastole*. At the root of each of the above-named arteries are three valves, which are like membranous bags, so arranged that when there is any regurgitation, they assume the appearance represented by the annexed cut. 6 in



the diagram marks the aperture, or large passage, through which the air inhaled passes into the spongy texture of the lungs; and 7 7 are the trunks of arteries and veins which supply the head.

It was the opinion of Harvey that the Heart was the sole agent by which the circulation was effected; but we now know that there are several other agents that exercise, at least, auxiliary powers. There is no doubt, however, that the Heart has a marked influence upon all parts of the circulation: thus, in the large arteries, we may note that the increase of the current, set in motion, exactly corresponds with the contraction of the ventricles; and this is observed also in the smaller arteries at an interval scarcely appreciable: in the capil-

laries even, there is an occasional pulsatile motion to be seen in the transparent parts of an animal, by means of a microscope, after a bleeding, when the Heart is beating very faintly. In the veins, also, we find this influence exerted. If the main artery and vein of a limb be exposed and isolated, and an opening made in the latter, the flow of blood may be regulated pretty exactly by compressing the artery, and thus, as it were, cutting off from the vein the supply given to it by the impulse of the Heart, whence we may likewise note, that it not only by its contraction propels the blood, but in its expansion it acts as a sucker to draw it up, so that it is at once both a sucking and a forcing pump; and such is the power of its action that the whole mass of the circulation, about 28 pounds, goes through the system in the space of three minutes. More of this will be explained as we proceed to speak of

Diseases of the Heart. These may be divided into—1st, Functional or Nervous; and 2nd, Structural, or Organic. Chief among the former we have *Palpitation*, *Syncope* or *Fainting*, and *Angina Pectoris* (which see). In a structure so complex, and formed of such different tissues as the Heart is, one might expect that it would be subject to many diseases of both a general and a partial character; and, accordingly, we find there are few persons who have not had to complain of symptoms which were indicative of Heart affection of some kind, although few, perhaps, really have what may be properly called *Heart disease*. Strong emotions of the mind, derangements of the liver or stomach, will often cause flutterings and palpitations, an increase or decrease of arterial action, and other symptoms, which would seem to indicate that there was something very wrong with the great organ and centre of circulation; but these symptoms, in the great majority of cases, are merely sympathetic; and very commonly, when a person is said to die of “a broken Heart,” there is no organic disease to justify the popular verdict.

Among the principal organic diseases to which the Heart is subject, we may notice first, *Pericarditis*, or *Inflammation of the Pericardium*, which may be induced by exposure to damp and cold, and other causes which affect the serous membranes of the body generally. The *symptoms* are tenderness over the region of the Heart amounting, when pressure is made, to sharp, cutting pains, so that the patient cannot lie on the left side; most commonly the *pleura*, or investing membrane of the lungs, is involved

in the mischief, and in this case, there will be acute pain, on coughing or drawing a deep breath; sometimes, however, there is little or no acute pain, only a sense of heaviness and oppression: generally the pulsations are accelerated, often so much so as to constitute flutterings or palpitation; they may be regular or intermittent; although it is not easy to feel this, if, as is frequently the case, there is much effusion into the pericardium; this may be detected by the bulging out of the skin of the thorax over the seat of disease: of the nature of the effusion—whether it be merely thin bloody serum, or thick with coagulated lymph, or fibrous, or containing cartilaginous or osseous deposits—can only be determined by auscultation employed by a skilful person. Pericarditis is one of the most frequent and worst features of acute *Rheumatism* (which see).

Carditis, or Inflammation of the Heart sometimes occurs, and here, although the principal seat of mischief is the muscular tissue of the organ itself, yet its investing membrane is generally implicated more or less, and the same *symptoms* are presented as those just described, although it is likely to be in an aggravated degree. It would be useless to prescribe any general plan of *treatment* in these cases, as this must depend very much upon the peculiarities which they present, and the temperament and condition of the patient. Of course, if inflammation is quite apparent, low diet and aperients must be the rule; leeches may be applied over the cardiac region, if there is much pain, and especially if accompanied by a pricking or burning sensation; but the lancet should never be used, except by the medical man, who alone can judge of its propriety. Perfect rest, and an avoidance of all excitement, should always be enjoined in this and other cases of Heart disease.

Endocarditis, or Inflammation of the lining membrane of the Heart, is commonly an attendant of the two former diseases, or of inflammation of the internal coat of one or more of the principal veins: its chief symptoms are fever and anxiety, with bulging of the præcordial region; it requires, like the others, as a rule, rest and antiphlogistic treatment.

Atrophy of the Heart sometimes accompanies a state of general debility; it is a consequence of a deficiency in the supply of blood, and will be pretty sure to terminate in death.

Hypertrophy of the Heart, is the result of an excess of nutrition; the nutritive process here appears to go on more rapidly than the absorbent. Fresh matter is deposited

before the old is removed, and hence there is an increase in bulk, which interferes with the proper performance of the *organic* functions. Hearts have been known to increase in this way to more than double their proper size and weight. Hypertrophy is usually divided into three kinds: viz. *simple*; *eccentric*, or *aneurismal*; and *concentric*; the first is the least common, in this the *parietes*, or divisions, are thickened, without any diminution in the capacity of the cavities; the second, most frequent, has the parietes thickened, and the cavity proportionably enlarged; the third, has the cavity diminished, in proportion to the thickening of the walls. Any one of these forms of Hypertrophy may affect a single cavity, or the whole Heart. If the left ventricle is attacked, apoplexy and hæmorrhages sometimes ensue. In this disease, the pulsations are for the most part regular and strong, often visibly raising the bed clothes; the chest is bulged out on the left side, and the sound on percussion dull. Rest, abstinence, sedative medicines, and more or less depletion, according to the circumstances of the case, are the proper remedial measures. It is only by perseverance in this course that any good can be looked for.

Dilation of the Heart, is sometimes caused by excessive exertion and strong excitements of any kind; in this case it would seem to be the result of increased action. The whole substance of the organ, or one or more of the cavities, or smaller orifices may be dilated, the walls being merely extended without any increase of substance. In this case the muscular parietes being thinned and feeble, there will be a want of vigour in the circulation, the muscular compression and extension will be weak and irregular, and the valvular action incomplete, so that the blood will frequently escape out of its proper channels, and these hæmorrhages, although trifling in themselves, will so reduce the patient, that he will, probably, be carried off by one of them. Abstinence from the exciting causes of the disease; rest, and nourishing diet, with strict attention to the general state of the health, are the means to be taken in this case.

Disease of the Valves, so commonly follows Endocarditis, if of long continuance, that it may almost be considered as a chronic form of that disease; it is a thickening of the internal lining of the Heart, especially at the valves; it becomes not merely thickened uniformly, but is the seat of warty excrescences, and even cartila-

ginous and osseous formations of considerable size, extending into the cavities of the Heart. In old persons, and especially those addicted to a generous mode of living, we most frequently meet with ossification, the effects of which are sanguineous and serous congestion, difficulty of breathing, apoplectic seizures, and other symptoms of embarrassed circulation.

Ruptures of the Heart sometimes occur, not only, in the valves, and columns of muscular fibres, but also in the parietes. The effect will depend upon the extent and situation; if a valve, or one of the muscular fasciculi, be broken through, serious derangement of the circulation takes place; it sometimes, although not often, happens that one of the walls of a large cavity is so injured, as to allow of an escape of blood into the pericardium; in this case, death is the inevitable and almost instant consequence.

Hydrothorax or Dropsy of the Heart; this is a collection of fluid in the cavity of the chest, or the pericardium; it is never an idiopathic disease, but is consequent on some previous disorder of the viscera of the chest, it may be of the Heart or lungs, or their investing membrane, the pericardium or pleura. It is characterized by great difficulty of breathing, especially after exertion, and when the body is in a horizontal position, with great weight and oppression at the chest; pallid purpleish countenance, with an anxious expression, and the usual symptoms of *Dropsy* (which see for treatment).

Opening of the Foramen. It sometimes happens that the *Foramen ovale*, which leads from the right to the left auricle of the Heart, is improperly closed at the time of birth; and a permanent aperture is the consequence; through this the venous blood passes in greater or less proportion, according to the extent of the opening into the left side of the heart, and is there mixed with the red arterial blood which circulates through the system; the consequence of this is a deterioration in the quality of the vital fluid; the outward symptoms are a blueness of the skin, lips, and nails, a low temperature of the body, and an unhealthy state altogether. There is shortness of breath, palpitations, faintings, a feeling of suffocation, and a liability to hæmorrhage, attended by great loss of strength. We call this, from the colour of the skin, Blue disease, in Latin *Morbus cæruleus*, also *Cyanosis* (which see).

We have now to speak of the Nervous or *Symptomatic* affections of the Heart, which

we meet with chiefly in women who are suffering from anæmia, chlorosis, hysteria, &c.; and in men of a quick, irritable temperament naturally, or rendered so by a free use of stimuli; or an unrestrained indulgence of the passions, and irregularities which seriously interfere with the working of that delicate piece of machinery which we have been attempting to describe, and whose stoppage must cause instant death.

Displacement of the Heart (called *Ectopia cordis*, from the Greek *oktopiki* to displace), sometimes takes place; it is generally congenital, but is sometimes a consequence of effused fluid, or of its subsequent absorption. Cases are on record where this organ has occupied the right side of the chest, the lungs and other organs presenting a relative change of position without any disturbance of their functions. It has also been found pushed out of the left into the right side by tumours, or extensive effusion of fluid into the pleura; this latter is the more common occurrence.

Palpitation of the Heart has been experienced by most persons who have run themselves out of breath, or by any violent exertion, caused a great increase of action in the respiratory and circulatory organs. In a healthy and proper state, we are not generally sensible of the regular *beat, beat* of the pulse, which goes on night and day, whether we sleep or wake, and tells that the great organ of vitality is duly performing its office; but when, from any cause, these beats become unusually frequent and forcible, we both feel and hear them, in a very troublesome and distressing manner; and especially is this the case when the bodily strength has been reduced, and the nervous sensibility increased by illness; then we seem to feel within us the swing of a great pendulum, and the "*throb! throb!*" vibrates through the chambers of the brain, and appears to call forth echoes from every cavity and passage of our internal structure, in a manner that is perfectly agonizing. Sometimes the pulsations are loud, and clear, and regular, at others, they are faint and intermittent; now a distinct throb or several, and then a tremulous flutter, or a quick beat, like the wings of a confined bird, flapping against the bars of its prison. When there is violent throbbing of the heart, which may be felt by a hand pressed upon the chest, while the patient is himself unconscious of it, there is reason to apprehend organic disease; but when there is such acute consciousness, as we have described, there is generally only functional or nervous derangement, without any struc-

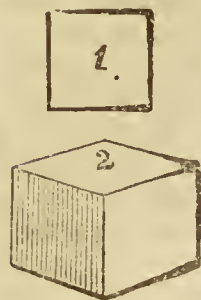
tural change. A disordered stomach may be the cause, although there may be no other symptoms of this: we have known cases in which a very slight irregularity in the mode of living has produced Palpitation of the Heart, and that too, in an otherwise healthy person. In some, almost any strong nervous stimulant will produce it, and we recollect one instance in which it always came on after a cup of tea, and was never troublesome when this beverage was not taken: we mention this to show that Palpitation is not always, nor indeed commonly, symptomatic of Heart disease; and need therefore cause no unnecessary alarm, although its frequent recurrence should set the patient inquiring as to what is the real cause. Young women with whom there is derangement of the menstrual functions, in whom the blood is watery and poor, wanting the red corpuscles; the listless, the pallid, the hysterical, in these we meet with Palpitation in its most aggravated forms; as also in the indolent, the susceptible, and the delicate; those who dwell on morbid fancies, and excite the imagination with sensual thoughts, or horrible pictures. To such every beat of the pulse seems like a call from the world of spirits, every flutter and palpitation like a brush from the wings of the angel of death, or the whispering voice of an accusing conscience. In these cases the only treatment likely to be of service must be directed towards removing the predisposing and exciting causes, and establishing a more healthful nervous condition—gentle exercise, tonics, change of air and scene; an endeavour to occupy the mind in some useful and moral pursuit; a well-regulated and generally frugal, although sufficiently nourishing diet; and a strict avoidance of all that can excite or stimulate either mind or body. By this means Palpitations, not connected with organic disease, may generally be got rid of. If the patient is of a full habit, and has a tolerably strong pulse, bleeding or cupping may, perhaps, be resorted to with advantage; but this should be cautiously done. In such, too, a course of gentle purgatives may be necessary; they should not be salines, but of a cordial nature, something like this.—Pill of Aloes and Myrrh, and Compound Galbanum Pill, of each $\frac{1}{2}$ a drachm; divide into 12 Pills, and take one at bed-time. Compound Infusion of Senna and Decoction of Aloes, of each 3 ounces; Spirits of Sal Volatile, 1 drachm; Compound Tincture of Cardamums, 2 drachms; Tartrate of Potash, $\frac{1}{2}$ ounce; mix, and take two tablespoonsful occasionally.

Heart-burn is a sense of uneasiness at the pit of the stomach, from whence it ascends, with acid eructations and a burning heat, into the throat. Sometimes it is accompanied by faintness, nausea, and vomiting, and commonly by what is termed Water-brash, the mouth becoming filled with a limpid fluid from the stomach, the upper orifice of which is called cardis, from its being the seat of the Heart; it is especially liable to be disturbed by any irritating causes, and such disturbance we term *Heart-burn* or *Cardialgia*. Anything which deranges the functions of the stomach will be likely to cause this—indigestible food, especially butter and cheese, or fat and oil of whatsoever kind; so also will strong mental emotion and pregnancy, in the latter months of which there is usually more or less Heart-burn. The best remedies are alkalies, combined with mild aperients, such as Magnesia, or Tartrate of Soda and Rhubarb. If there is much flatulency, Gregory's Powder, in $\frac{1}{2}$ -drachm doses, is good; and where the pain is great, about 5 drops of Laudanum may be taken with each dose. In obstinate cases, a leech or two, or a succession of small blisters, to the pit of the stomach, will probably be useful; but the main thing is a well-regulated and simple diet, and avoidance of the offending substances; no ale, beer, nor wine, but a little brandy and water at dinner; gentle exercise, and the treatment directed under the head of *Dyspepsia*.

HEAT. We understand by this term, first, the sensation experienced in coming in contact with a body of a higher temperature than that of the blood: second, the cause of that sensation, or *Caloric* (which see). Into the theory of this important agent, as it affects the operation of the great laws of nature, we need not enter at all fully, our inquiry just now being directed to its action on the human system, in its different states and conditions of health or disease: as it is desirable, however, that our readers should understand something of the nature and properties of Heat, we think it necessary to give some explanation thereof.

There are two states in which we find Heat. In the one case we recognize it by the touch, in the other we cannot find it out by such means. The air has a very large quantity of Heat hidden in it, even when it seems coolest to you. It contains so much Heat, even in the depth of winter, that the quantity contained in a few square inches, if driven out, is sufficient to light a piece of tinder. We have drawn here a figure of a solid square, or cube, that we may be fully

understood. Each face has four edges, as in fig. 1, and there are six faces to the solid square, as in fig. 2. Now if you had a vessel which would hold about twelve square inches or eubes of air, and could so manage as to compress it into the size of one square inch, so much Heat would be given out that a piece of tinder would be set on fire by it.



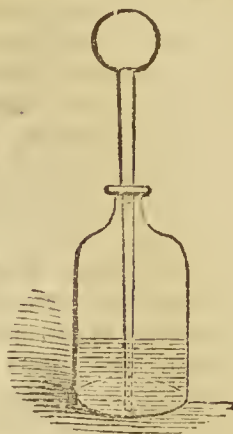
If you procure a piece of thick iron wire, and hammer the end of it on an anvil or hard stone, you will find that after a few blows it has become very hot. You have compressed the particles of the iron, and the latent, or hidden, Heat, has become sensible to the touch. The Heat kept the particles or atoms of iron apart from each other; but when you have hammered them close, your hammering will produce no more Heat. You have learned by this experiment, which any one may perform with a piece of soft iron wire, that Heat has a tendency to separate the particles of which bodies are composed, and make them larger. This separation is called *expansion*. A bar of iron, when heated, becomes longer; and hence, if the iron pieces or plates upon which the wheels of the railway engines run were to be placed in winter with their ends close against each other, they would be so expanded by the warmth of the sun in summer, that they would become crooked, and the line would be unsafe to travel upon.



This expansion of bodies by Heat is taken advantage of by persons who wish to measure sensible Heat. Thermometers are constructed of bodies which are readily expansible by Heat. Those commonly in use are made of quicksilver enclosed in glass. The glass tube is mounted on a piece of bone or ivory, which bears the marks of degrees, so that the amount of expansion or contraction of the quicksilver can be stated or registered. There are various forms of Heat measurers, or thermometers, and this is how to construct a simple one. Take a wide-mouthed

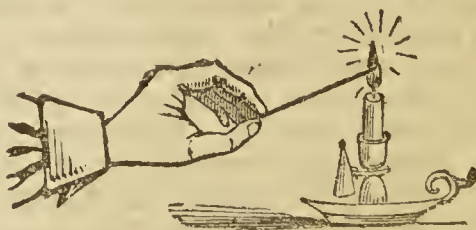
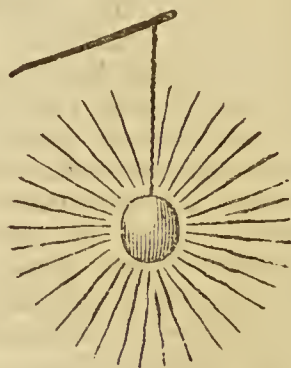
bottle, pour into it a tea-spoonful of ink, and two tablespoonsful of water, and set it upon the table. Having procured a glass tube, which has been blown into a bulb at one end, warm it thoroughly before

the fire, and then rapidly place it in the bottle, so that the open end is plunged into the ink and water at the bottom. In a second or two the air in the round bulb of the tube will begin to contract, and the inky water will ascend the tube, and perhaps rush into the bulb. When all upward motion in the water has ceased, place your hand upon the bulb, and you will then, by warming the air inside, cause it to expand, and the water in the tube will again descend. Pure water would answer as well as the mixture of ink, but the latter is more easily seen as it ascends and descends the tube.



If you place the bulb and bottle near the fire, the air in the bulb will be expanded still further. Your thermometer just shows that Heat has been taken from the fire and combined with the air in the bulb. But how was the Heat conveyed from the fire to the bulb? By what means was it communicated?

Heat is conveyed in two different manners. A heated globe of iron, if suspended in the air, would send out *rays*, or straight lines of Heat, in every direction, as in this diagram. When Heat is given off and conveyed to another body by rays in this manner, it is said to be by *radiation*. To illustrate the other mode in which Heat travels, hold the end of a piece of iron wire, of three inches in length, in the flame of a small taper. The *radiated* Heat from the flame you will scarcely feel, but the Heat will be speedily conducted to your fingers along the wire, which will become so hot that you will scarcely be able to hold it. When Heat is thus conveyed by a metal or other solid

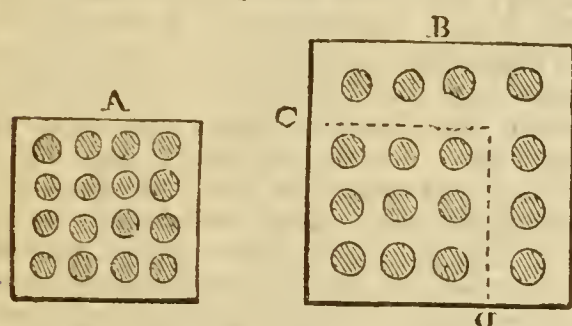


body from a fire or flame to any other body, it is said to be by *conduction*. Metals conduct Heat rapidly; and hence metal tools

which require to be used while hot have the handles covered with wood, which does not allow the warmth to pass from the iron to the hand of the workman. You could hold a piece of wood of much shorter length than the wire in the taper's flame, and feel no inconvenience. These circumstances prove that wood does not conduct or convey Heat as rapidly as iron; it is therefore said to be a bad conductor—in other words, its power of transmitting warmth is small. Woollen cloth is a still worse conductor; and for that reason, when the flat iron is used by the laundress, she protects her fingers with a piece of folded flannel, which does not allow the Heat from the handle of the iron to burn her hand.

You have seen how the air is expanded by Heat, and contracted by cold; it is important, moreover, to understand, that in a cubic inch of cold air there are more particles than in a cubic inch of heated air.

The figure A represents a cold cubic inch



of air, which we will suppose contains sixteen atoms or particles, of air. If to this be applied a very small quantity of Heat, it would expand to the size of B, without any increase of the number of particles, or in its weight. A cubic inch (as indicated by the dotted lines C and C'), would then only contain nine atoms or particles of air.

If the cold cubic inch weighed sixteen grains, the hot cubic inch would only weigh nine. If bodies are expanded by heat, they contain fewer particles in a given space; if they are contracted by the removal of that Heat, they contain more particles in the same space. Some of these particles would be oxygen and some nitrogen, always bearing the same proportion.

We now proceed to speak of the branch of it with which we are principally concerned, viz.:—*Animal Heat*, the evolution of which constantly attends the processes by which the food of man and the higher animals is converted into nutriment, so that the temperature of the body is maintained at a point above that of the medium of its existence. In the lower animals, this evolution of Heat is very small compared with that of the higher; indeed, it seems to rise in propor-

tion to the powers of locomotion possessed by the animal, so that where the greatest muscular power is exercised, there is the greatest demand upon the nutritive process going on in the system; this will well explain why great workers are commonly great eaters, and why the food of the labouring man is indeed sweet, hunger being the sauce that sweetens it. People who want an appetite are very properly recommended to walk or ride, or in some way to exert their muscles. (See *Exercise*).

In man the temperature of the more accessible parts of the body, such as the mouth, axilla, &c., is between 97° and 98°; in a state of health the blood is commonly about 100°; in disease, when there is an unnatural stimulation of the organs, it rises sometimes as high as 109°. This Animal Heat attains its maximum during the day, that is, in healthy persons, falling about 2 degrees during sleep; the temperature of the body is 2 or 3 degrees higher in tropical than in temperate climates, and in most of the mammalia, which live a life of great activity, it is higher than in man; while birds develop calorific in a much greater ratio than any other class of animals, in consequence of the nutritive changes going on to support the enormous muscular power which they exert during flight.

Let us endeavour to explain how this evolution of Heat is produced by the chemical changes which take place in the nutrient fluids of the body. During the act of respiration much oxygen gas is taken into the lungs, and absorbed by the blood, in which fluid it combines with the various compounds of carbon, which formed the constituents of the food. Now we know that out of the body, when carbon and oxygen unite, an increase of heat is the natural consequence; we are therefore justified in believing that the same result is produced in the body by the union of these two gases. As the blood pursues its appointed course through the system, and gives out its oxygen, an excess of carbon is left and expelled from the lungs in the shape of carbonic acid gas, as we have already explained under the several heads of *Blood*, *Circulation*, *Heart*.

Now as there is far more oxygen absorbed into the system than passes out of it again, the probability is that this enters into combination with hydrogen, nitrogen, carbon and their compounds, which are the result of digestion, and tends to produce Animal Heat, forming, as it were, a stock of fuel for the combustion which is constantly going on more or less rapidly in proportion to the muscular exertion required. On this hy-

pothesis we can quite account for many well-known phenomena; for example the low temperature of persons affected with *morbis cæruleus*, whose blood is but imperfectly oxygenized, and of aged and debilitated persons, with whom there is a slow circulation; such are constantly complaining of being "chilly." Friction and active exercise, again, will restore the warmth to the limb or body chilled by exposure to cold, and by inactivity, and we can well understand why this is, and also why persons labouring under attacks of inflammatory disease, in whom the blood circulates with great rapidity, should be hot and flushed. In the foetus, and young animals born in an imperfectly developed condition, there is but little independent warmth; because the lungs have not begun to act, and draw in a supply of that which forms the fuel of the body. Animals which lie torpid for a time breathe very slowly, if at all; the consumption of fuel with them is very trifling.

Having thus explained, as clearly as we could in a small space, the theory of Heat in its relation to the animal economy, we shall now proceed to speak of it in a medical point of view; first, as to its *physiological* effect, that is, its action upon the body in a state of health; and second, as to its *therapeutic* effect, when used as a remedy for disease.

It should be borne in mind that, the sources of Heat, or Caloric, are various; there is—1st, the sun's rays; 2nd, combustion; 3rd, percussion; 4th, friction, which is mechanical action; 5th, chemical action, such as the mixture of different substances; Sulphuric Acid and Water, for example, where the particles of the two fluids have a different degree of density; and 6th, electricity or galvanism.

The effects of a high temperature such as prevails in tropical countries, that is from 80° to 100° is well known to be extremely debilitating to the system not born in, and inured to it: under these circumstances the temperature of the human body, as we have just stated, is considerably raised; there must therefore be a greater consumption of Heat, and to supply this, the demands upon the digestive and assimilative powers are increased precisely at a time when they are too languid and inert to supply the ordinary demand; hence that derangement of the internal organs which is so common to Europeans in India and other hot climates. There too, as also sometimes in our own country, during sultry summers, we witness the more immediate and marked effects of

Heat in what are called sun-strokes. (See *Coup de Soleil*).

The skins of persons exposed to the rays of a burning sun, is liable to be affected in various ways, the most common being an eruption of small pimples, or vesicles filled with watery fluid; this is accompanied by a pricking or tingling sensation, and is hence, and from its cause, termed Prickly Heat. A tepid bath will, generally, alleviate the symptoms, or an application of Goulard Water, with the administration of a saline aperient to cool the system and keep down inflammatory action, to which those living in a high temperature are especially liable; hence, the greater danger of wounds, cuts, the bites of animals, or any abrasion of the skin, under such climates, and the peculiar virulence which the poison of snakes and other reptiles possesses. All fevers and other inflammatory diseases run their course more quickly, and have more aggravated symptoms in such circumstances, hence they are less amenable to remedial measures, and attended with greater fatality. Still, it is well known, that human beings can exist and enjoy good health, although exposed to constant and excessive heat, provided it be unattended with much moisture. A dry Heat may be borne and enjoyed by those accustomed to it, but with wet comes malaria, rapid evaporation, and other evil influences.

With regard to its therapeutic effect, we may simply observe that Heat may be used as a soothing application—an anodyne in fact, or a counter-irritant, and may be recommended as one of the safest and most accessible remedial agents for unprofessional persons to resort to; it may be applied moist as a fomentation, poultice, or saturated bran-bag; or dry, as in hot-water bottles, waterproof bags, and the like. Solid inelastic vessels are not so pleasant for the application of Heat as those which are yielding, and adapt themselves to the shape of the part; we should therefore recommend the employment of bags filled with heated grain, salt, bran, or some such material; but, best of all, is one of Hooper's elastic cushions, containing hot water. In all cases of severe form, such as colic, spasm, gall stone, gravel, &c., this may be applied with great advantage. When a derivative action is required, as in inflammatory pain, it is perhaps best to use the moist bran bag; its good effect in these cases, is to produce perspiration from the part, and this method combines the anodyne action of an increased temperature with the relaxing effect of the moist Heat. It should be borne in mind that in cases

which require astringing rather than relaxing, Heat should never be applied; it increases the flow of blood from a wound or cut, and also the swelling of swollen parts. (See *Inflammation*, *Fomentations*, *Poultices*).

Heat is sometimes applied as a counter-irritant to the extent of cauterization. See *Cautery*.

HEATH, or HEATHER. The *Erica* or *Calluna Vulgaris*, belonging to the natural order *Ericaceæ* is a very common plant of the



woodland and mountain districts of this country; it is commonly called *Ling*, and is sometimes employed in fomentations.

HECTIC (Greek *ektikos*, habitual). This term is sometimes used, like the Greek feminine, as a substantive, to denote a protracted or habitual fever; but more commonly as an adjective, in conjunction with the term fever, signifying an intermittent form of the disease, which generally occurs at the latter stages of *Consumption*, (which see); and also other diseases of a slow

wasting character. In these cases, we may notice, that at about six o'clock in the evening the pale cheeks of the patient begin to mantle with a beautiful flush, generally so circumscribed in its character, that we can trace its outlines; the eyes brighten, the conversation becomes animated, and the listless languid manner, so painfully conspicuous throughout the day, is changed for a lively and vivacious air, all betokening an unnatural elevation of spirits; this may last five or six hours; then the paroxysm is over, the Hectic flush fades away, and a chill, accompanied by a clammy moisture, creeps over the whole frame; this is the herald of a profuse perspiration, which completely bathes the patient, and leaves him or her, towards morning, in a state of utter prostration. These are the *symptoms* of Hectic, which has been well called the ensign of death; it is like the glorious tinge on the autumn leaf, the sure prognostic of decay.

HEDERA. The name of a genus of plants, containing about 50 species, some of which are employed medicinally; among them are *Hedera Helix*, and *H. Terrestris*, the *Ivy*, and *Ground Ivy* (both of which see).

HEDYSARUM (Greek, *edys* sweet, and *aros* a plant). A genus of plants, belonging to the natural order *Leguminosæ*. In it we find *H. Alhagi*, and *H. Sennoidis*; the former is said to yield the manna of Arabia, and the latter, whose name signifies Senna-like, has a root which is much valued in India, where it grows.

HELENIUM (in the Greek of Dioscorides, *elenion*). A species of *Inula* (see *Elecampane*); from which a nutritious fecula is obtained, called *Helenine* or *Inuline*.

HELIANTHUS (Greek, *elios* the sun, and *anthos* a flower). A genus of plants of the natural order *Compositæ*; our most familiar example is the common Sun Flower, (*H. Annulus* which see); and the Jerusalem Artichoke, (*H. Tuberosus*); whose tubers are wholesome and nutritious, but scarcely adapted for persons of weak digestion, or those subject to flatulency. On some persons, Artichokes proper, that is the leaves, act as an aperient; they should be well boiled if taken at all. Dr. Paris observes that the term Jerusalem applied to Artichokes, is a curious corruption of the Italian *gira-sole*, that is turn-sun in English, *heliotrope* in Greek.

HELIOTROPIMUM (Greek *elios*, the sun; and *trepo*, to turn). The Blood Stone, so called from the red specks which appear on its green surface. It was formerly held in great estimation, as an application to the

back to stop bleeding of the nose, and is still sometimes used for this purpose; although it is not more efficacious than any other cold substance.

HELIX (Greek *elix*, from *elisso*, to turn about). This term is applied—1st, to the outer rim or margin of the external Ear, two muscles of which are called *Helices*, *major* and *minor*; 2nd, a coil of wire used in the application of *Galvanism* and *Magnetism* (which see); 3rd, a testaceous animal inhabiting a spiral shell; one of these is *Helix pomatia*, a large kind of snail, recommended as a nutritious food for consumptive patients; it is still found in Sussex and Buckinghamshire, having been introduced from the south of Europe by Sir Kenelm Digby for his lady, when in a decline, he having estates in these counties. See *Snails*.

HELMINS (Greek *elmins*, or *elminthos*, a worm). Hence we have *Helminthagogues*, remedies against worms (see *Anthelmintics*, *Vermifuges*); *Helminthiasis*, a disease, peculiar to some countries, in which worms are bred under the skin (see *Guinea Worm*); and *Helminthocorton*, a plant celebrated for its vermifuge properties; it is generally known as *Corsican Worm Seed*.

HELLEBORE (Greek, probably from *elein*, to seize; and *bora*, in eating). The root of the



Helleborus Niger, Black Hellebore, better known as the Christmas Rose, a plant of the

natural order *Ranunculaceæ*; is an irritant poison, although sometimes given medicinally. Its properties are those of a hydragogue cathartic—that is producing watery evacuations—and an emmenagogue. It has been found useful in apoplexy, amenorrhœa, epilepsy, dropsy, hypochondriasis, and eutaneous diseases; it is now seldom prescribed, and certainly ought not to be given, except under the direction of the medical man. The dose of the Powdered root is from 5 to 10 grains; of the Extract, 5 to 10 grains; Tincture, 1 drachm.

There are other species of Hellebore used medicinally. The *H. Fœtidus* (Stinking Hellebore) is given as a vermifuge, the dose of the Powdered leaves being, for a child from three to six years old, from 5 to 20 grains; or a fluid ounce of the Decoction, made by boiling a drachm of the dried leaves in 8 ounces of water; there is also a Syrup, the dose of which is a teaspoonful at bed-time. This plant is sometimes called Bears' Foot.

The *Helleborus Viridens* (Green Hellebore) has been employed in America as a remedy for fevers of the typhoid class, and for some convulsive diseases of children, when attended by febrile symptoms. It is, however, a dangerous remedy, and one that we should be sorry to see much used in this country. *White Hellebore* (*Veratrum Album*), and *Bastard Hellebore* (*Serapius Latifolia*), are also sometimes used medicinally. See *Veratria*.

HELODES (Greek *elos*, a marsh). A term applied to fevers arising from marsh miasma. See *Fevers*.

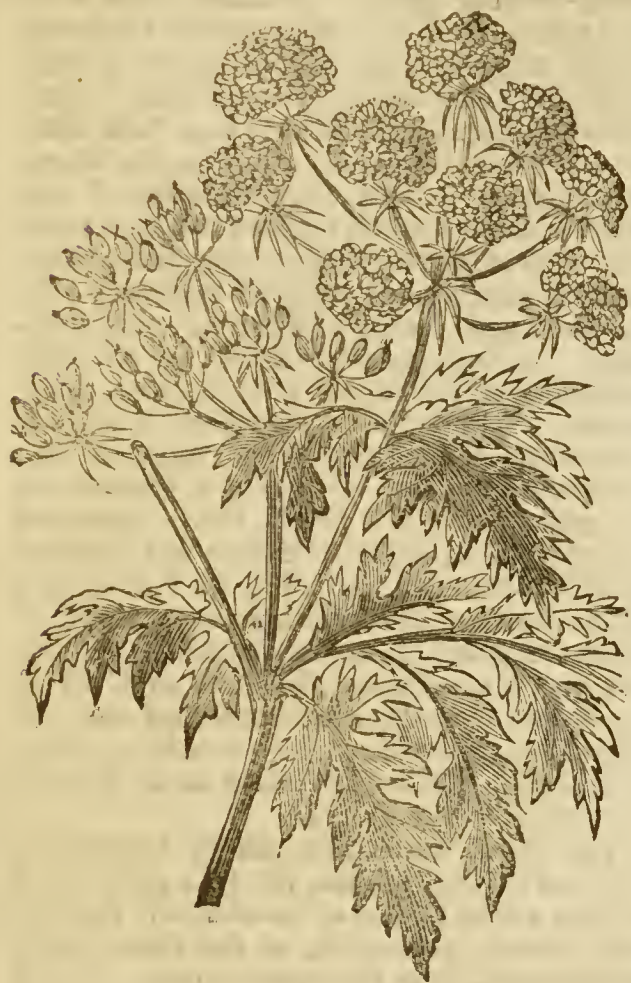
HELOS (Greek as above, or Latin *clavus*, a nail). A name given to the tumour formed by prolapsus of the *proceedentia iridis*, a part of the *Eye*, (which see), also *Myoecephalus*.

HELXINE (Greek *elko*, to draw). A name given to the Pellitory of the Wall; a plant remarkable for clinging to whatever it touches, hence the above name. See *Pellitory*.

HEMEDESEMUS INDICUS. Indian Sarsaparilla. The fragrant roots of this plant are used in Madras as a substitute of Sarsaparilla, under the name of Country Sarza. It has also been introduced into this country, and obtained some attention. It is supposed to be useful in affections of the mucous membrane generally, and to possess the sudorific and alterative properties of *Sarsaparilla* (which see). There are three forms in which it is usually administered—viz., Decoction, take a wineglassful three times a day; Syrup, 1 to 2 ounces; and

Infusion, 2 ounces; the latter should be taken with Lime Water.

HEMLOCK. The *Conium Maculatum*, or Spotted Hemlock, is a plant of the natural order *Umbellifera*, and a powerful narcotic

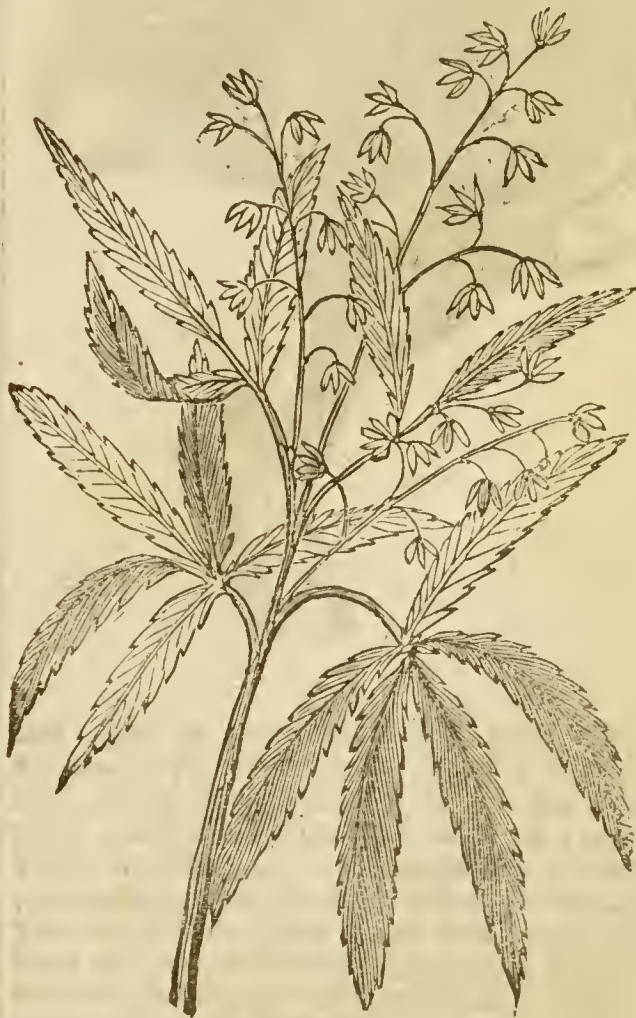


poison; this principle residing chiefly in the leaves and seeds: it is common in many English counties, and is believed to have yielded the state poison of the ancient Greeks, by which Socrates and others were put to death. The roots are said to have, when boiled, very much the taste of parsnips; but we should not recommend any of our readers to make a meal of them, as it is likely that, in certain states of the atmosphere, or conditions of growth, that they too may be poisonous. We give Conium as an anodyne, antispasmodic, and deobstruent; but in scirrhus and cancerous diseases, only as a palliative; also in pulmonary irritation, hooping cough, neuralgia, chronic rheumatism, and all cases in which sedatives are likely to be of service; in skin diseases and enlarged viscera, too, it is given, and several other diseases. The dose of the Leaves, dried and powdered, is 2 or 3 grains, gradually increased until slight nausea, or giddiness, is produced; of the Extract, from 2 to 3 grains, once a day, increased as above; of the Compound Pill, from 3 to 5 grains

two or three times a day; Tincture, from 20 to 40 minims. There are two other preparations of this plant, but they are very rarely employed. The Ointment and Plaster are anodyne and resolvent, and the dried leaves, mixed with a carrot or other poultice, and applied twice a day, corrects the fœtor of a cancerous discharge in a very short time, and alters the discharge into a salutary pus.

The activity of Conium is much diminished by acids; hence, in a case of poisoning by this plant, Vinegar would be a good and easily procured remedy; of course, the stomach should be relieved of as much of the poison as possible by emetics. As a proof of the poisonous nature of the plant, we may mention that, during the present year, a boat's crew of men from H.M.S. "Wellington," while on shore at Cambeltown, dug up a quantity of Hemlock, which they mistook for wild celery or parsley. The men who partook of it—eight in number—became very ill, and two of them died.

HEMP, or INDIAN HEMP. Botanical name *Cannabis Sativa*, well known for its nar-



cotic properties. The Hindoos prepare from it an intoxicating liquor called *Banga*; and a similar beverage is taken by the Turk

under the name of *Malach*, the Arabian name for which is *Haslish*. The Hottentots also use it for the purpose of intoxication, calling their liquor *Dactin*; and in Nepaul, *Cheris* or *Cherris* is the name of a most powerful gum resin, which is said to be obtained from a variety of this plant. See *Cannabis Indica*.

HENBANE. The botanical name of this plant is *Hyoseyamus Niger*, derived pro-



bably from the Greek *yos*, a hog, and *kyamos* a beast, so named either because hogs eat it, or because it is hairy, like swine; by some it is called Hogbean, *Faba Suilla*; it belongs to the natural order *Solanaceæ*, and is a strong narcotic poison, the leaves and seeds being chiefly used for medical purposes; the latter are the most active. There are two cultivated varieties of this plant, one annual and the other biennial; the latter is considered the most active. In this country the plant grows

wild on waste and ruinous places, it appears to prefer a chalky soil, and is sometimes found on cliffs by the sea side; it is commonly about 3 feet high, with a hairy stem, and large, deeply-indented leaves of a dull sickly-looking green. It bears, from June to August, dull yellowish white blossoms, thickly marked with purple lines; it has a peculiarly fetid and unpleasant odour. Notwithstanding Pliny's dictum that "all Henbane is of the nature of wine, and is therefore offensive to the understanding;" this plant is much used in modern medical practice, as it is found to allay pain, and subdue nervous excitement without confining the bowels, and acting otherwise prejudicially, as Opium often does; in irritable affections of the lungs, bowels, and other organs, its sedative properties render it extremely valuable. The dose of the Powdered Leaves, is from $\frac{1}{2}$ a drachm to 2 drachms; of the Fresh Juice expressed and preserved, from $\frac{1}{2}$ a drachm to 1 drachm; of the Tincture, $\frac{1}{2}$ a drachm to 2 drachms; of the Extract, (the most common form of administration), from 3 to 10 grains. There are also Cataplasms, Plaisters, and Oil of *Hyoseyamus*, intended for external use. In over doses, Henbane causes delirium, coma, and death, and its operation is in general very rapid. See *Poisons*.

The Seeds sometimes relieve toothache; the best method of use, for this purpose, is to heat a small piece of metal nearly red hot, and placing them on it, let the fume which arises ascend into the open mouth; taking care not to inhale too much of it. See *Narcotics*.

These Seeds contain an alkaloid principle called *Hyosciamin*, combined with Malic Acid. It is in the form of transparent, colourless, needle-shaped crystals, without odour, and with a disagreeable taste. The root of the plant has been mistaken for chicory, and it is related by Wepfer that the whole inmates of a convent once were victims to such a mistake. It is violently emetic, and necklaces are sometimes made of it, to be worn by children subject to convulsions, under the false impression that they will effect a cure; these Roots are biennial, and are more energetic in their action the second year than the first.

HENNA, or HENNE. The dye so called, used by the women of the East for giving a yellow colour to their nails and fingers, which they consider ornamental, is formed of the powdered leaves of the *Lawsonia Alba* or *Inermis*, made into a paste: skins and Morocco leather are also dyed with it. The colour which the plant furnishes is adherent

and durable, and may be varied from yellow to bright red or orange. In Egypt this dye forms a considerable article of trade, fourteen or fifteen ships being annually laden with it at Alexandria, from whence they are despatched to Smyrna, Constantinople and Salonica; their freight afterwards passing into several countries of the North, and even to Germany, where furs and leather are dyed with the powdered leaves of the plant, whose blossoms are white and very fragrant, and are much prized by the Turkish ladies who are seldom without them. Sonnini says that "they attach so high a value to the possession of this flower, which the mildness of the climate and the facility of culture seldom deny them, that they would reserve it to themselves exclusively; and they cannot with any degree of patience, bear that it should be worn by the Jewish and Christian women." See *Lawsonia*.

HEN BLINDNESS. A name sometimes given to Night Blindness, or *Nyctalopia*. See *Eye*.

HEPATALGIA (Greek *Hepar* or *Hepartos*, the liver), pain in the Liver. From the same root we have also *Hepatic*, belonging to the Liver, as Hepatic Artery, Duct, Glands, Vein, and Plexus, all of which will be described when we come to treat of the Liver; as will also *Hepatorrhœa*, a morbid flow of bile, *Hepatitis*, inflammation of the Liver, and *Hepatocèle*, hernia of the Liver. Then there are two ligaments, described by Haller, and called by him *Hepato-colic*, and *H. renal*. *Hepato-gastric* is the name of the smaller omentum, which passes from the liver to the stomach; and that peculiar change in the lungs induced by inflammation, in which it loses its spongy, crepitating character, and becomes hard and firm, so that it sinks in water, is called *Hepaticization*, or sometimes *Spleenization* (see *Lungs*). Then again the term *Hepar* was formerly applied to several combinations of sulphur with alkalis, on account of their liver-like appearance: thus, we have *Hepar Antimonii*, Liver, or more properly, Oxy-sulphuret of Antimony; *Hepar Sulphuris*, Liver of Sulphur, the *Sulphuretum Potassæ* of the Edinburgh Pharmacopœia; and *Hepar Sulphuris Volatilis*, the Hydro-sulphuret of Ammonia, sometimes called Beguin's or Boyle's Fuming Spirits. None of these preparations are now much used medicinally. *Hepaticæ* is the Liverwort tribe of acotyledonous plants; *Hepatic air* is Sulphuretted Hydrogen Gas; and *Hepaticæ* is a variety of Barytes, containing a portion of Sulphur (which see).

HEPATA PHARMACUM (Greek *epta*, seven; and *pharmakon*, a medicine). A preparation which we sometimes read of in old medical books, said to be composed of seven ingredients—viz., Ceruse, Colophony, Incense, Lethargæ, Ox-fat, Pitch, and Wax.

HERACLEUM GUMMIFERUM. Gum bearing Heracleum; an umbelliferous plant, sup-



posed by some to be that which produces the *Gum Ammoniacum* (which see).

HERB BENNET. The *Geum Urbanum*, or Avens; sometimes called *Caryophyllata*, from its clove-like smell. See *Geum*.

HERBE DU DIABLE. Devil's Herb, a name given in St. Domingo to the *Plumbago Scandens*, on account of its acrid properties.

HERB ROBERT. A species of wild Crane's-Bill, or *Geranium* (which see).

HERBS. In ancient days, the herbalist was the real or pretended curer of all diseases, and the preparer and vendor of famous nostrums; with him every plant of the field and woodland had its peculiar properties, which depended much on the time of gather-

ing, and the accompanying ceremonies. Our belief in the marvellous efficacy of Herbs, or "Yarbs," as the country people call them, is a good deal shaken now-a-days; but we still entertain a well-founded and rational belief in the virtues of many of them, or this work would not be illustrated with so many really medicinal plants.

As a general rule, the Herbs used in pharmacy should be collected when they are beginning to flower, in dry weather, and at mid-day, when the greatest quantity of moisture has evaporated. They should then be subjected to a gentle heat, spread out thin, and frequently turned, to complete the drying process as quickly as possible; the leaves, or whatever part it is desired to preserve, should be put into bags, and hung up in a dark place until wanted; before drying in this way, the plants should be well shaken, to expel insects and their eggs, and all discoloured and rotten portions rejected.

Almost any common Herbs are useful for fomentations, their principal utility being the retention of heat; some, however, are better than others. Camomiles and Mal-lows are among the best.

HERCULES BOVIL. Names emblematic of the strength of Hercules and a bull combined; applied to a solution of Gold and Mercury in a distillation of Copperas, Nitre, and Sea Salt; it is violently cathartic.

HEREDITARY (Latin *hæres*, an heir). A term applied to diseases supposed to be transmitted from parents to their children. It is an undisputed fact, and has been so from remote ages, that at least a bias or tendency towards certain diseases is transmitted through many generations. We know for certain, that there are maladies which are so directly inherited as to show themselves immediately on birth—such has been the case with small-pox; but this is by no means the common rule, that, being for the hereditary taint to lurk in the system, awaiting favourable circumstances for its development. Sometimes these circumstances never occur, and so the disease remains undeveloped; but it will probably show itself in the next generation, and vindicate its character for persistence.

Hereditary predisposition to certain diseases may be derived from parents who have not themselves received them in the same way. Drunkenness, or whatever tends to debilitate the system of the parent, will be almost sure to affect the constitution of the children. Nervous irritation, or great mental excitement of any kind, although but of a temporary character, may often be traced in its effects upon the offspring; so, also,

syphilitic eruptions will break out in children, one or both of whose parents have been long afflicted with syphilis. This disease, with scrofula and consumption, gout and rheumatism, asthma, ophthalmic affections, epilepsy, paralysis, insanity, and other diseases, are clearly ascertained to be transmittable by hereditary taint; especially is this the case with consumption, gout, gravel, and insanity, as is well known to insurance directors, who frame their forms of proposal for life policies accordingly. A very curious and interesting branch of physiological inquiry is this law of Hereditary taint. We know that it includes many diseases, but not *how* many; therefore we can assign no limits to its operation, neither can we state the precise conditions under which it acts. Enough we do know, however, to satisfy us that much of the mischief caused by it might be avoided, if persons would make it a matter of duty to ascertain their own or their parents' peculiar predispositions to disease, and avoid as far as possible all which might tend to excite and develope it. Especially should a marriage be avoided between two persons in whom, or in whose families, there is the same hereditary taint, and more particularly if a blood relationship exists between them. Degeneration is inevitably the result of intermarriages among relations, and hereditary diseases are sure to acquire greater power and permanence where there is a weakly state of the body. As we often see peculiarities of feature and physical conformation, as well as mental idiosyncracies, running through families, so it seems reasonable to expect certain forms of organic or functional disease; and we may well believe that contracted diseases may be transmitted, as well as inherited ones. How careful, therefore, should every person be to avoid all which may tend to develope latent maladies; and, especially, all excesses and indulgences which may entail bodily weakness or mental imbecility on his offspring. Verily, if the parents eat "sour grapes," the children's teeth will be "set on edge."

HERMAPHRODITE (Greek *Hermes*, Mercury, and *Aphrodite*, Venus). One in whom the organs of generation are a compound of those pertaining to both sexes. This is a congenital malformation, a monstrosity of nature, which no art can rectify, and a subject which it would serve no useful purpose to dilate on here; we have simply introduced it in order to explain the meaning and origin of the term.

HERMETIC SEALING (Greek *Hermes*). Substances which it is desired to keep for a

length of time, from contact with the air, are sometimes hermetically sealed, that is, they are put into a glass tube, the open end of which is then heated to the melting point, and when in this state, the edges are bent in and closed by means of a pair of tongs. The Egyptian god, Hermes, was supposed to have taught the practice of Chemistry, which was from him called the Hermetic art; hence the term applied to this operation.

HERMODACTYLUS. Greek *Hermes*, and *daktylos*, a finger, as some say; but more probably from *Hermus*, the name of a river in Asia, on whose banks grows the plant to which the above name was applied; it is supposed to be identical with the *Colchicum Autumnale*. See *Colchicum*.

HERNET'S DENTRIFICE. A kind of Tooth Powder, the composition of which was for a long time unknown; it is now ascertained to be Powdered Orris Root, Cream of Tartar, and Cuttle Fish Bone, 1 ounce of each of the two former, to 8 ounces of the latter. It is a good cleansing application for the teeth, and has a tendency to sweeten the breath. See *Tooth Powder*.

HERNIA (Greek *ernos*, a branch, so-called from its protruding forward). The protrusion of one or more of the viscera into a sac, formed of the peritoneum. There are various kinds of Hernia, each of which is distinguished by a particular name, having relation to some peculiarity connected with it; thus we have, 1st., as regards situation:—*H. cruralis*, or Femoral Hernia, a protrusion under Poupert's Ligament, descending through the crural or femoral ring, sometimes called the crural canal. *H. inguinalis*, Inguinal Hernia, sometimes called Bubonocoele, or Hernia of the Groin; this is termed *complete* when it protrudes through the abdominal ring; *incomplete* when it does not. *H. ischiatica*, when it protrudes at the ischiatic notch, in front of the Os Innominata, or Hip Bone. *H. perinealis*, Hernia of the Perinæum, occurring in men between the bladder and rectum; in women between the rectum and vagina. *H. pubendalis*, Hernia of the Pubendum, which descends between the vagina and the ramus ischii into the labium. *H. scrotalis*, Scrotal Hernia, sometimes called Oscheocoele; there are two varieties of this, termed *Enteroscheocoele*, when omentum, or intestine, or both, descends into the scrotum; *Epiploscheocoele*, when omentum only; and *Statocele*, when neither, but only sebaceous matter descends. *H. thyroidalis*, Hernia of the Foramen ovale; (See *Heart*). *H. umbilicalis*, Umbilical Hernia, sometimes called *Omphalocoele* or *Exomphalos*. In this case

the bowels protrude at the umbilicus or navel; it is termed *Pneumatomphalos*, when caused by flatulency. *H. vaginalis*, Hernia of the vagina; it is sometimes called *Elythrocele*, and occurs within the Os externum. *H. ventralis* or Hypogastrocele, Hernia, occurring at any part of the front of the abdomen, generally between the muscles.

We next distinguish Hernia by its contents, as *H. cerebri*, or *Encephalocoele*, Fungus Cerebri, or Hernia of the Brain (which see). *H. intestinalis*, or *Enterocoele*, containing intestine only. *H. omentalis*, or *Epiploccele*, containing omentum only—when both this and intestine are the contents it is called *H. entero-epiploccele*. *H. uteri*, or *Histerocoele*, Hernia of the Uterus or Womb. *H. vesicalis*, or *Cystocoele*, Hernia of the Bladder. *H. corneæ*, or *Ceratocoele*, Hernia of the Cornea: (See *Eye*.)

The third distinction of Hernia has respect to its condition, as *H. congenita*, Congenital Hernia, making its appearance at birth; *H. incarcerata*, Strangulated Hernia, that which cannot be reduced with constriction, but requires an operation.

The fourth distinction is as to its internal seat: *H. mesenterica*, or *mesocolica*, Hernia through the lacerated mesentary or mesocolon; *H. phrenica*, Hernia of the Diaphragm, and *H. intestinalis*, in which the intestines protrude through a loop formed by adhesions.

Then there are certain cases to which the term Hernia is misapplied, as *H. gutturis*, enlargement of the thyroid gland (see *Bronchocoele* or *Goitre*); *H. sacci lacrymalis*, Rupture of the Lacrymal Sac, it is also called *Mucocoele*, or *Fistula lacrymalis* (see *Eye*); *H. varicosa*, or *Cirsocoele*, a varicose enlargement of the spermatic vein; *H. ventosa*, or *flatulenta*, sometimes called *Pneumatocoele*; any Hernia distended with flatus, or wind; *H. carnosa*, or *Sarcocoele*, a fleshy enlargement of the testes, or a tumour seated in the scrotum.

Then we call Hernia *Reducible*, when it can be reduced or replaced within the abdomen; *Irreducible*, when it is not constricted, yet cannot, owing to adhesions, be replaced; and *Incarcerated* or *Strangulated*, when it is constricted, and cannot be reduced.

As to the *causes* of Hernia, we term them *Predisposing* when, owing to weakness and relaxation of the muscles, the openings through which the bowels are likely to escape are unusually large; and *Exciting*, when there is powerful action on the abdominal viscera and muscles, owing to jumping, coughing, or other violent exertion.

For treatment of all these cases, see *Rupture*.

HERNIOTOMY (Hernia, and Greek *tome*, section). The operation for Strangulated Hernia. See *Rupture*.

HERPES (Greek *erpo*, to creep). This is a class of eruptions of the skin, consisting of clusters of vesicles seated upon inflamed patches of irregular size and form. Bate-man divides them into the following species: *H. circinatus* and *H. iris*, Vesicular and Rainbow Ringworm (which see); *H. labialis* and *H. præputialis*, Herpes of the lips and of the prepuce; *H. phlyctænodes*, known as *Miliary* and *Nirles*; *H. Zoster*, *Cingulum* or *Shingles* (which see).

HERPES MALIGNUM ANGINOSUS. A name proposed to be given to a disease of the throat, which has recently made its appearance in England. It has been known for some years to the French, who have called it *Diphtherite*, from the Greek *diphtheritis* or *diphtherus*, one clothed in skins; from *diphthera*, skin or leather. This name was given to the disease on account of its tendency to form false membranes over the part affected; it is the opinion of some who have most closely observed the disease, that it is decidedly herpatic, and therefore the above name has been proposed for it. "It varies in extent," says Mr. Cummoek, of Boston, in Lincolnshire, where it has prevailed, "from simple Herpes of the lips and nose, which are covered with vesicles, which burst, ulcerate, and heal in two or three days, to the most extensive inflammation, and sloughing and ulceration of the cheek, the palate, and the pharynx; and more in children than adults. It extends into the larynx and trachea, and kills by asphyxia."

"In the mildest form there is a tendency to ulceration beneath a white, loosely-attached membrane, which consists of epethelium, coagulated with viscous mucus, and lymph. In most cases the vesicular nature can be distinctly traced for a few hours after its commencement, from the large patch within the cheek, or upon the gum, which will slough like *cancerum oris*, to the more diffused bulbæ upon the soft patch and pharynx. I believe that, in some instances, it extends to the gullet and stomach."

Diphtheria comes on, in many instances, very suddenly, like cholera, influenza, and erysipelas, without any warning symptoms; in others, there is soreness of the throat, like tonsillitis, or of the naris, like catarrh; or there is pain in the deglutition, like pharyngitis, or cynanche maligna; shiverings are very irregular.

The specific cause of the disease is atmos-

pheric; as in cholera, influenza, typhus, and potatoe rot. Debility, cesspools, malaria, and all nuisances predispose to it; and all irregularities of regimen, cold drink when heated, sudden changes of temperature, and over exertion, are exciting causes.

The principles of *treatment* are antiseptic and tonic, stimulant and nutritious. The capillary system should not be engorged with fluids, neither should anything evaporating be applied to the skin. Blisters inflame and ulcerate; leeches debilitate and their bites slough; and strong purgatives cannot be borne. Temperate, dry, and well-ventilated bed-rooms, are a desideratum; a Calomel purgative, varying in strength with the age of the patient. In children, where there are symptoms of laryngitis, a rapid exhibition of the Chloride of Mercury, such as a grain or two every hour until the breathing is easier; then every three or four hours until the false membrane is loosened, and the bowels evacuate green stools, or vomiting commences. It has been found that children who are teething have the most inflammatory symptoms. Decoction of Bark, with Hydrochloric Acid, varying the dose of the latter from 1 minim to 10 every four hours, in from a teaspoonful to two tablespoonful of the former. Gargle with Chloride of Sodium and Vinegar, a tablespoonful of each in a teacupful of hot water; also inject this up the nostrils when they become obstructed; this relieves the breathing, destroys the fetor, and allows the ulcers to heal.

Apply a stick of Nitrate of Silver to every part where the false membrane or exudation can be seen; when the disease spreads beyond the caustic case, a probang and a clean sponge saturated with a strong solution of Nitrate of Silver will answer.

Rub the external fauces with Compound Iodine Ointment night and morning, and, where erysipelas may appear, apply the Stick caustic, and lay on a plaister of strong Mercurial Ointment.

Keep all about the patient sweet and clean, and give a nutritious diet—such as mutton, milk, rich gruels, and beef tea; and a warm Negus-compound of Port Wine and Water, equal quantities, with Sugar and Lemon. All the drinks should be taken warm.

This is not an infectious disease, except under extraordinary circumstances. Where it has occurred, which is only in a few localities, the deaths have been very numerous, as many as five having died in one family.

HERRING. This is the *Clupea harengus* of naturalists; a fish which frequents our coast in immense shoals, and furnishes sub-

sistence at certain seasons to a large proportion of the working population; it is no doubt nutritious, but too oily to suit weak stomachs. See *Fish*.

HESPERIDES. The old name for a genus of plants whose fruits are generally acidulous and refreshing; it includes the Bergamot, Citron, Lemon, Lime, Orange, and Shaddock, such as might be supposed to have grown in the famed gardens of the Hesperides; hence the name. A bitter inodorous principle procured from the Orange has been called *Hesperidine*.

HETEROGENEOUS (Greek *etero*, other, and *genos* kind). A term applied to compound substances, the parts of which are of different kinds; its opposite is *Homogeneous*.

HETEROPATHY (Greek *eterus*, other; and *pathos*, a disease). The art of curing diseases; founded on differences, by which one morbid condition is removed by engendering another. This is the opposite of *Homæopathy* (which see).

HEUCHERA, or Alum root. The *Heuchera Cortusa*; a plant valued in America for its astringent properties, being used as a styptic in external hæmorrhages and cancerous sores.

HIBISCUS (Greek *ibiskos*, mallow). A genus of dicotyledinous plants belonging to the natural order *Malvaceæ*; they are mostly natives of the hot parts of Asia and America, and abound in mucilage; several of them are employed for various economical purposes, for instance, the petals of *H. Rosa Sinensis* are astringent, and are used in China as a black dye for the hair and eyebrows. The seeds of *H. Abelmoschus* are employed as stomachics (see *Abelmoschus*). The root of *H. Manichot*, yields a mucilage which is used by the Japanese to give a proper consistence to their paper, &c.; the leaves of *H. Cannabinus* and *Arboreus* are eatable, as are also the leaves and fruit of the *H. Esculentus*.

HICCUGH or **HICCUP**. Of this compound word it has been suggested that the first syllable *hic* may have reference to *hitch* or *catch*; *hickup* is the general pronunciation. This is a convulsive catch of the respiratory muscles, causing spasmodic contraction of the diaphragm, with a partial closure of the larynx; generally, it is but trivial and transient, causing no permanent inconvenience; but, sometimes when it occurs in the latter stages of acute disease, it is very alarming, indicating a giving way of the nervous system.

Young females of an hysterical tendency sometimes suffer from obstinate Hiccup, we have known it continue for weeks with but

little cessation, except during the hours of sleep, and, occasionally, breaking in upon them. Long fasting, or the sudden introduction of some strong stimulant into the stomach will often cause a common Hiccup, for which cold water, continually sipped and swallowed, will often prove a remedy but nothing is so likely to remove it as strong excitement of the mind. Acupunctuation has been recommended as a remedy, but we have never seen it tried, and much question the desirability of its application. Most antispasmodic medicines are likely to be of service, and we have seen the following given with good effect:—Carbonate of Soda, 1 drachm; Sulphuric Ether, 3 drachms; Tincture of Ginger, 2 drachms; Tincture of Gentian, 4 drachms; Camphor Mixture, sufficient to make 8 ounces. Take two table-spoonsful every two or three hours. Sometimes hot applications to the upper part of the chest and throat will relieve the symptoms; but, if all these should fail, a surgeon had better be consulted, especially if the patient is in a weak state.

HIDROTICA (Greek *idros* or *idrotos*, sweet), medicines which cause perspiration; (see *Sudorifies*). The name *Hidron*, from the same root as the above, has been given to Eczema, or heat eruptions; the halo which surrounds the vesicle is popularly named a heat spot.

HIERA PICRA (Greek *ieros*, holy; and *pikros*, bitter). The two words of which the above is compounded express the high estimation in which this preparation was once held, and its bitter taste. It is the popular name—often corrupted to “Hikery Pikery”—for Powdered Aloes with Canella Bark, the *Pulvis Aloes cum Canella* of the Pharmacopœias. It was formerly called *Hiera Logadii*, and made into an electuary with honey; it is a good purgative medicine, but extremely nauseous. See *Aloes*.

HIERONOSIS. (Greek *ieros* and *nosus*, a disease), literally sacred disease, an ancient name for epilepsy; called also *Morbus Sacer*.

HIP. Surgical name *Ischium* (which see). The *hip joint* is formed, on the one hand, by the rounded head of the thigh-bone, and, on the other, by the deep cup-like cavity prepared for its reception in the bones of the pelvis; it is a good example of the ball and socket joint.

HIP JOINT DISEASE, called *Morbus coxarius*, generally occurs in children of a scrofulous habit. Professor Syme's description of it is so clear and simple, that we are tempted to quote it verbatim:—“Hip Disease prevails in cold moist climates, and attacks chiefly children between the ages of

seven and fourteen, thought it is not unfrequently met with both before and after that time of life. The first symptom complained of, is generally pain in the knee, which often exists for months, before any indications can be perceived of the true seat of the disease. Sooner or later, the patient is observed to walk awkwardly and less vigorously than usual; and when the circumstances on which the difference depends, are investigated, it appears that the affected limb is elongated and emaciated; that the convexity of the hip is flattened, so that the furrow between it and the thigh is less distinct and more oblique in its direction, and that in standing, the foot is advanced a little before the other one, with the toe slightly averted; and that the patient does not rest his weight upon it. Pain is now felt in the Hip Joint itself, and though aggravated by motion, often becomes more severe from time to time, without any such cause of irritation. It is most apt to do so during the night, particularly when the weather is wet and changeable. In the second stage, the disease generally remains several months, and, sometimes, a year or two. At length the symptoms which have been mentioned, either disappear, and the limb recovers its former condition, or they are succeeded by others still more disagreeable. In the latter case, the limb becomes considerably shorter than the sound one; its mobility, at the same time, being much impaired, or altogether destroyed, and permanent rotation either inwards or outwards, also taking place. Collections of matter now make their appearance, most frequently in the outer wall of the Hip, but occasionally in the groin and Hip. In some few instances, but very rarely, the fluid of these abscesses is absorbed, but the ordinary course which it follows, is to issue externally through openings formed by ulceration, or artificially by surgeons. The patient then, after a tedious illness, becomes hectic and dies, or recovers with a stiff joint, and wasted useless limb."

As this disease is generally pretty far advanced before it is discovered, but little can be done for it the way of domestic treatment; a surgeon should be consulted: as a general rule, counter-irritants in the first stages, such as blisters and setons, with a leech or two, if the swelling and inflammation accompanied with pain, is great; afterwards the same treatment as that prescribed under the head *Abscesses*.

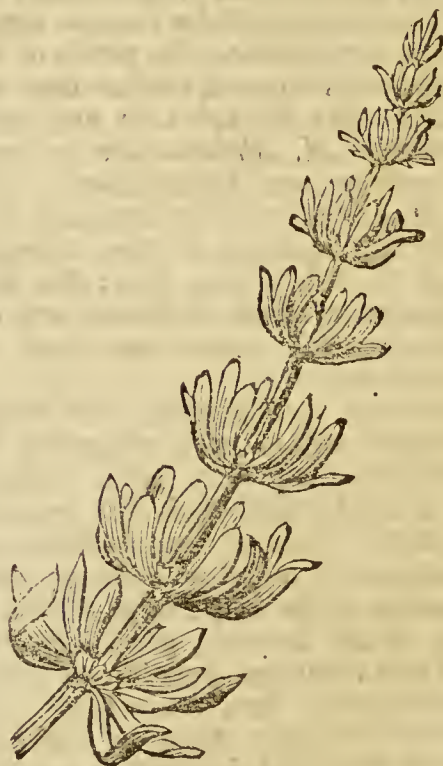
Besides the scrofulous affection above described, the Hip Joint is also liable to *Dislocations* and chronic *Rheumatism* (both of which see)

HIPS. The ripe fruit of the *Rosa Canina*, or Dog Rose; it is used medicinally, in the form of a confection, but chiefly as a vehicle



for other remedies; by itself it is pleasant and acidulous, and may be taken by persons suffering from the thirst caused by fever. See *Dog Rose*.

HIPPURUS (Greek *ippos*, a horse; and *oura*, a tail). The final division of the spinal marrow is so called; it is also named *Cauda equina*, the Latin for horse's tail (see



Spine). This name is also attached to a genus of plants, of which the Mare's Tail, *H. Vulgaris*, is a familiar example. We find the prefix *Hippo*, a horse, attached to

several scientific terms, as *Hippomanes*, a humour in mares, anciently an ingredient in philtres or charms. *Hippuric Acid* is an acid obtained from the urine of horses; it is somewhat analagous in character to Benzoic Acid. The prefix is, in some cases, Grecian, denoting large size, as *Hippo Castanum*, the Horse Chestnut; and *Hippo Selinum*, the Horse Radish (which see).

HIPPOCRAS. A kind of cordial or spiced wine, to which we find frequent allusions in old writers; it was made by macerating 1 ounce of Cinnamon, $\frac{1}{2}$ an ounce each of Cloves, Nutmeg, Mace, Ginger, Cardamums; and $\frac{1}{4}$ of an ounce of Canella Bark, in 3 pints each of Madeira and Canary wines for about seven days; then strain, and add $\frac{1}{4}$ of a pound of Refined Sugar. As a cordial for aged and weakly persons in whom there is no inflammatory tendency, something like this may be useful.

HIRCINE (Greek *hircus*, a goat). A substance found in the fat of the goat and sheep, yielding by saporification the *Hircic Acid*, which, according to Chevreul, forms salt in combination with chlorine.

HIRSUTIES (Latin *hirsutus*, shaggy). Applied to a superfluous growth of hair (which see).

HIRUDO MEDICINALIS. Latin for the medicinal leech, named by the Romans *haurio*, to draw or suck up, as expressive of its well-known peculiar action. See *Leech*.

HIVES. The popular name in the north of England, and in some parts of Scotland, for a kind of chicken-pox, called by Willan *Varicelli globularis*.

HOARHOUND or HOREHOUND (sometimes called Gipsywort). The name is Saxon, *hara hune*, white hunc, hue, or colour. This is a common native plant remarkable for the white down which covers the stem and leaves, and gives it a hoary appearance. Its botanical name is *Marrubium Vulgaris*; it has demulcent properties, which render it useful in chronic coughs, for which it is a common domestic remedy, being generally taken in the form of Tea, prepared by infusing an ounce of the fresh leaves in a pint of boiling water for an hour; then strain and sweeten: take a wineglassful occasionally, adding at bedtime 30 drops of paregoric or 5 drops of laudanum.

Syrup of Horehound is made by boiling 1 pound of Lump Sugar with the same quantity of a strong decoction of the leaves of the plant, until it assumes the proper consistency; and *Candied Horehound*, by evaporating the syrup until it becomes thick enough, on cooling, to eat as a lozenge. (See cut in next column).



HOFFMANN'S ANODYNE LIQUOR or SOLUTION. This is the *Spiritus Etheris Sulphurici Compositus* of the Pharmacopœias, whose component parts are Etherial Oil 2 drachms, and Sulphuric Ether 1 pound; it is a good antispasmodic. See *Æther*.

HOLLY, HOLM or HULM (formerly called Holy plant). Name probably a corruption



of holy; botanical name *Ilex Aquifolium* belongs to the natural order *Aquifoliaceæ* the only British member of the genus *Ilex*; has several varieties, all possessing the same medical properties; the leaves are bitter, mucous, and astringent, having an austere taste; they were formerly used as a diaphoretic, and an infusion of them was given in catarrh, gout, pleurisy, and small-pox. In France, a few years since, they obtained a great reputation as a febrifuge, being equal, it was said, to Peruvian Bark, their virtue depending on a bitter principle called *Ilicin*. The berries of this plant are powerfully purgative, 10 or 12 being generally sufficient to act on the bowels; they also act as an emetic and diuretic: the expressed juice is said to be beneficial in jaundice. From the inner bark the viscous substance called bird lime is prepared; the wood, which is hard, white, and fine grained, is much used in turning and cabinet work.

Knee Holly is the Butcher's Broom, of the genus *Ruscus*, (which see).

Sea Holly, the Eryngo, (which see).

The Hollyhock, one of the greatest ornaments of gardens, called in botanical language *Althæa rosea*, has flowers which are slightly astringent, and yields a blue dye, said to be equal to indigo. (See *Mallows*).

HOMBERG'S PHOSPHORUS. Ignited Muriate of Lime, sometimes used as a caustic. From the same source, we have also *Homberg's Pyrophorus* (Greek *pyros*, fire, and *phero*, to bring); a mixture of Alum and Brown Sugar, which ignites on exposure to the air. A compound of 3 parts of Lampblack, 4 of Burnt Alum, and 8 of Carbonate of Potash, will do the same. *Homberg's Sedative Solution*, is simply Boracic Acid.

HOMOGENEOUS (Greek *omoios*, like, *genos* kind). Applied to substances made up of parts possessing the same properties; its opposite is heterogeneous.

HOME SICKNESS (sometimes called *Nostalgia*). Is a peculiar affection of the mind to which exiles from their native land are subject; it especially affects the inhabitants of mountainous countries, and of these, has been noticed in the Swiss and the Scotch more than any others. It consists in a vehement and uncontrollable desire to return to the old homes of childhood. The bodily health may be perfectly sound, the mind clear and vigorous, but this desire possesses it like a mania, and if it is not gratified there is melancholy, loss of sleep and appetite, and, finally, it is likely that organic disease will ensue, probably of the lungs or heart. Whatever brings forcibly to mind

old scenes and memories, is likely to excite this affection, but nothing so much as national melodies; hence, when Scotch or Swiss troops are stationed abroad, it has been found necessary to forbid the performance of such airs.

HOMŒOPATHY (Greek *omoios*, similar, *pathos* a disease). A mode or principle of treating diseases introduced by a German physician, named Hahnemann. It is founded on the supposition that a disease is curable by such medicines as would produce in a healthy person symptoms similar to those which characterize the disease to be treated. The contrary system, on which medical men generally act, is *Heteropathy* or *Allopathy* (which see).

It is not our purpose here to contend for or against the doctrines of this new school of pathology; it will be sufficient for us to give a brief statement of them, so that our readers may understand, as far as unprofessional readers can, the *rationale* of Hahnemann's mode of treatment. The homœopathic hypothesis appears to rest upon a triangular basis; and here are the three points of contact, which are called by those who profess belief in the system, the three general lines of nature:—1st, we have the assertion that *like cures like*; 2nd, that the healing properties of remedies increase by subdivision, trituration, and succession; therefore, 3rd, and as a consequence, it is proper to give infinitesimal doses of medicines in the treatment of disease. Upon this foundation is built up the whole system of Homœopathy, which has met with favour and adoption from a considerable number of men of education and ability, both in and out of the medical profession, and from a very large number of the uninstructed public at large. It is much pleasanter certainly to take medicine in infinitesimal doses, and in the form of minute globules made of sugar, than in the old nauseous mixture and powder, pill and draught fashion. There cannot be a doubt that, generally speaking, the human system has been overphysiced; and this has arisen, in a great measure, out of the practice of charging for medicines only, or chiefly, and not for the medical man's skill, and time, and trouble. People were not satisfied to pay a heavy bill for attendance, they must have so many mixtures, and draughts, and pills; so they had them, and swallowed them, or not, as the case might be; but, at all events, they obtained something tangible, as value received for their money. It appears to us that Homœopathy is something like a reactionary movement; we have gone from

overdosing to underdosing; and by-and-by, no doubt, there will be an approximation of the two extremes, and matters will find their level upon the true basis of medical science. Most of the defenders of this system of treatment rest chiefly upon the first proposition above named—viz. that *like cures like*; and they say that the system might yet stand, even if infinitesimal doses were shown to be inert: if, as it is generally believed, they are so, what becomes of the second proposition, and how is the first to be proved? That like does *not* cure like in full doses, we have abundant evidence to show, and that if greatly reduced, it does not act at all, or only in an inappreciable degree, has also been proved by repeated experiments. Here are two of the legs upon which the tripod rests knocked away from under it; and the third, without the others, is useless. But we may observe that this law of *similia similibus* was first propounded by Hippocrates, yet it had never been applied but in exceptional cases, until Hahnemann adopted it as a general, if not a universal rule, and, finding that it would not work with the old full-dose system, he added to it the two other hypotheses of the increase of the potency of medicines by division, and the consequent utility of infinitesimal doses. We may also observe, that the Homœopathists of our day repudiate much of Hahnemann's doctrine, and are by no means strict in their observance of the rules of the system which they profess. For they not unfrequently resort to full doses in the treatment of active disease. Allopathists have never denied that the Hippocratic law held good in some few exceptional cases, and they feel themselves at liberty to employ it, when it seems desirable to do so; but that its general application is safe and effectual, about ninety-nine in each hundred members of the medical profession deny; this is a large proportion, and we should pause ere we disputed their verdict. They would gladly fall into this method of administering medicines if they dared; for it would be far more pleasant to their patients to take sugar globules and tasteless liquids, than the nauseous preparations which they deem it necessary to administer, and more agreeable to themselves.

HONEY (in Latin, *mel*). A vegetable juice collected by the Honey Bee (*Apis mellifica*). When quite pure, it consists of crystallized sugar, like that of the grape, and of uncrystallized syrup, like molasses. The less pure kinds contain an acid and a portion of wax. When mixed with vinegar, it forms *Oxymel*, (which see).

The taste and quality of Honey depends very much upon the flowers from which it is collected, some, which is the produce of deleterious plants, being even poisonous in its nature; it is not often so, however, in this country. As an article of diet, Honey is wholesome to most persons, but with some it causes acidity and griping: it has a slight tendency to relax the bowels, and may, therefore, be taken by those who are habitually costive, especially children. Pure Honey will be, when fresh, perfectly clear, and of a pale amber colour. It deepens with age, and, if good, settles into a solid mass, with a granulated structure. It is sometimes adulterated with flour, and this may always be suspected when it presents a very white and opaque appearance. This is a good vehicle for the administration of medicines; and there are several medical preparations into the composition of which it enters, beside the Oxymels, of which we shall speak under their proper head. There is an old preparation, called Egyptian Honey (*Mel Egyptiacum*), being a compound of Honey and Verdigris; it is chiefly used as an outward application in farriery. In the modern Pharmacopœias we have the Honey of Borax (*Mel Boracis*), an excellent application for the mouths of children affected by *Thrush* (which see). It is made by mixing 1 drachm of powdered Borax with 1 ounce of Honey, and applied with a camel-hair brush. Honey of Roses is made by infusing 4 ounces of Red Rose Leaves in 2½ pints of Boiling Water; let it stand for six hours, and then strain, and add 4 pounds of Honey; let the whole evaporate in a vapour bath, and let it remain until it is of the consistence of syrup: this is a good adjunct to astringent gurgles. To make Clarified Honey (*M. depuratum*), heat it in a water bath, and strain it, while hot, through flannel. To prepare Honey Soap, which is very softening to the skin, and agreeable to use, take 2 pounds of the best Yellow or Curd Soap, cut it into thin slices, and put it into a vessel surrounded by water, which can be kept to a boiling heat; here it will quickly melt; when it has done so, add a quarter of a pound of Palm Oil, the same of Honey, and about a drachm of Oil of Cinnamon; boil the whole together for six or eight minutes; pour out upon a slab, where it can be made up into balls or cakes for use.

It has been observed that the Honey made in mountainous countries is more highly flavoured than that on low grounds, and that the Honey made in the spring is better than the summer produce, and that again than

the autumn. There is a preference given to that collected by young swarms, which is called Virgin Honey. The purest and choicest is that which is merely suffered to run out of the combs into the vessel set to catch it; but the coarser and deeper coloured kind is obtained by pressure from the combs of every sort, frequently after the other has been taken. The combs are broken up, and heated with a little water in basins or pots, being kept constantly stirred; they are then put into bags of linen cloth, and subjected to pressure in a press, or between two boards.

HOOPS OF ANIMALS. Are formed of a substance consisting of coagulated albumen



and gelatine, identical in its composition with *Horn*, (which see).

HOOK-LIKE HAMULAR. A designation of the small curved process of the sphenoid bone, sometimes called *Pterygoid* (which see), also *Skull*.

HOOPING COUGH. Sometimes called Chin Cough, query Chine Cough, or Kink Cough. In France it is generally termed *Coqueluche*; in Germany, *Keuchhusten*, or *Stickhusten*; in Scotland, *Kinkhoust*. By Willis it was termed *Tussis convulsiva*, and by Hoffman, *Tussis ferina*, and by Sydenham, *Pertussis*. This well-known disease is chiefly, but not wholly confined to the stages of infancy, and it occurs but once in a life-time. It may be described as a spasmodic catarrh, and its severity varies greatly; sometimes being so mild as to be scarcely known from a common cough, at others, exhibiting the most distressing symptoms,

and frequently causing death by its violent and exhausting paroxysms.

The first symptoms of this cough are those of an ordinary cold; there is probably restlessness and slight fever, with irritation in the bronchial passages; this goes on gradually increasing in intensity for a week or ten days, and then it begins to assume the spasmodic character: at first the paroxysms are slight, and of short duration, with a scarcely perceptible "hoop," but soon they become more frequent and severe; a succession of violent expulsive coughs is followed by a long-drawn inspiration, in the course of which the peculiar sound which gives a name to the disease is emitted; again come the coughs, and again the inspiration, following each other in quick succession, until the sufferer, whose starting eyes, livid face, swollen veins, and clutching hands, attest the violence of the struggle for breath, is relieved by an expectoration of phlegm resembling the white of an egg, or by vomiting. When the paroxysm is over, the child generally resumes its play, or other occupation, and frequently complains of being hungry. As the disease proceeds, the matter expectorated becomes thicker, and is more easily got rid of, and this is a sign of favourable progress: the spasmodic paroxysms become less frequent and violent, and gradually cease altogether; but the changes here indicated may extend over a month or six months, according to circumstances, the season of the year having much influence in hastening or retarding them; summer being, of course, the most favourable time. It is a common impression that, at whatever time of year an attack of Hooping Cough commences, it will not end until May; this is simply because of the change in the weather which generally takes place in or about the course of that month. With a strong, healthy child (when proper care is taken), there is little to apprehend from this disease, provided it be not complicated with others, such as inflammation of the lungs, or any head affection producing convulsions; it then proves a most dangerous malady, and is fatal to many. With children of a full habit, the fits of coughing often cause bleeding at the nose, but this should not be viewed with alarm, as it relieves the vessels of the brain, and is likely to prevent worse consequences.

To weakly children Hooping Cough is a very serious malady—to all it is frequently a sore trial, but to them it is especially so; therefore, great care should be taken not to expose them to the danger of catching it; That it is contagious there can be no doubt.

and although some parents think lightly of it, and imagining their children must have it, at one time or another, deem that it matters little when, and therefore, take no pains to protect them against it; yet we would impress upon all our readers, who may have the care of infants, that a heavy responsibility lies at their door. It is by no means certain that a child will have this disease; we have known many persons who have reached a good old age and never contracted it: and it is folly and wickedness, needlessly, to expose those placed under our care to certain danger.

Like fever, Hooping Cough has a course to run, which no remedies, with which we are at present acquainted, will shorten; the severity of the symptoms may be somewhat mitigated, and we may, by watching the course of the disease, and by use of the proper means, often prevent those complications which render it dangerous, and this brings us to the consideration of the proper mode of

Treatment.—The first efforts should be directed to check any tendency to inflammation which may show itself; to palliate urgent symptoms, and stop the spasm which is so distressing a feature of the case. To this end, the diet must be of the simplest kind, consisting for the most part of milk and farinaceous puddings; if animal food, it must not be solid, but in the form of Broth or Beef-tea; roasted Apples are good; and, for drinks, Milk and Water, Barley-water, Weak Tea, or Whey. Care must be taken to keep the bowels open with some gentle aperient, such as Rhubarb and Magnesia, with now and then a grain of Calomel or Compound Julep Powder, if something stronger is required. An emetic should be given about twice a week, to get rid of the phlegm—it may be Ipecacuanha Wine or the Powder. To relieve the cough, the following mixture will be found effective:—Ipecacuanha Powder, 10 grains; Bicarbonate of Potash, 1 drachm; Liquor of Acetate of Ammonia, 2 ounces; Essence of Cinnamon, 8 drops; Water, 6½ ounces: Dose, a tablespoonful about every four hours. 20 drops of Laudanum, or 1 drachm of Tincture of Henbane may be added if the cough is very troublesome, but the former is objectionable if the brain is at all affected.

For night restlessness, 2 or 3 grains of Dover's Powders, taken at bed-time, is good; this is the dose for a child of three years old. Mustard Poultices to the throat, the chest, and between the shoulders, are often found beneficial; so is an opiate liniment composed of Compound Camphor and Soap

Liniment, of each 6 drachms, and 4 drachms of Laudanum. *Roche's Embrocation* is a favourite application, and a very good one; it is composed as follows:—Oil of Amber and of Cloves, of each ½ an ounce; Oil of Olives, 1 ounce; a little Laudanum is, perhaps an improvement. This may be rubbed on the belly when it is sore from coughing. Difficulty of breathing may be sometimes relieved by the vapour of Ether or Turpentine diffused through the apartment. In the latter stages of the disease, tonics are generally advisable. Steel Wine, about 20 drops, with 2 grains of Sesquicarbonate of Ammonia, and 5 drops of Tincture of Conium, in a tablespoonful of Cinnamon Water, sweetened with Syrup, is a good form; but a change of air, with a return to a generous diet, are the most effectual means of restoration to health and strength.

Squinting, stupor, and convulsions are symptomatic of mischief in the brain; in this case leeches to the temples, and small and frequently repeated doses of Calomel and James's Powder should be resorted to. Fever, and great difficulty of breathing, not only during the fits of coughing, but between them, indicate inflammation in the chest, on which a blister should be put, after the application of two or three leeches. In this case, the rule must be low diet, with febrifuge medicines, such as Acetate of Ammonia. Tartarized Antimony in Camphor Mixture, and Calomel and James's Powders. Some medical practitioners have recommended the application of Lunar Caustic to the glottis in this disease, but no unprofessional person should attempt this. Others have found the Tincture of artificial Musk serviceable, beginning with 3 or 4 minim doses at the outset, and going up to 10 or 12 minims, in Barley Water, two or three times a day. Diluted Nitric Acid we have frequently administered both to children and adults, with decidedly beneficial results; from 5 to 10 drops in plain or Cinnamon Water, sweetened; it may be given very frequently; a little Ipecacuanha Wine, and Tincture of Henbane or Hemlock, about 5 drops, may be added to each dose. Cochineal and Salts of Tartar is the old popular remedy, and it is, no doubt, sometimes useful, but we would rather not depend on it.

Dr. Golding Bird recommends the following mixture:—Alum, 25 grains; Extract of Henbane, 12 grains, Syrup of Poppies, 2 drachms; Dill Water, sufficient to make 3 ounces: give a dessertspoonful every six hours.

Hops. The strobiles or female flowers of the familiar plant which botanists call

Humulus Lupulus, commonly used to impart a bitter flavour to ale and beer. They contain several elements of activity; thus the bitter principle is tonic, the aromatic warm and stimulating; they are also astringent and slightly anodyne, so that a pillow stuffed with them is considered to promote sleep, and a fomentation to allay the pain and irritation of angry tumours. They yield an aromatic oil, and a substance



called *lupuline*, in which the bitter property resides, that is, the tannin, and to a considerable extent their peculiar aroma also. We find them in the Pharmacopœia in the form of Extract, Infusion, and Tincture, which we give in cases of gout and rheumatism, and diseases of the stomach, where other anodynes could not be taken. The dose of the Infusion is from $\frac{1}{4}$ an ounce to 2 ounces; of the Extract, from 10 grains to 20; and of the Tincture, from $\frac{1}{2}$ a drachm to 1 drachm; the second is made by infusing 1 ounce of the flowers in 2 pints of boiling water; and the third by macerating 6 ounces of the flowers in 2 pints of proof spirit. The highly-hopped Pale Ale or Bitter Beer is a good medicinal tonic, but its regular use for a lengthened period is not desirable, except in very warm climates. Heated in a flannel bag, Hops are a common remedy for toothache and neuralgic pains, and the young shoots of the plant are, in some places, eaten like asparagus, for which they form a tolerable substitute.

HORDEOLUM. The diminutive of *Hordeum*, is a term applied to a sty or small tumour of the eyelids, which is thought to resemble a barleycorn.

HORDEUM DISTICHIN. (See *Barley*.)

HORN POCK. Sometimes called *Crystalline Pock*, a variety of variola, in which the pimples suppurate imperfectly; they are ichorous or horny, and semi-transparent. See *Variola*.

HORRIPILATIO (Latin, *horeo* to dread, *pilatus* the hair). A sense of creeping, beginning at the head, as though the hair was standing on end, and spreading thence over the whole body; it is symptomatic of approaching fever.

HORSE RADISH. This well-known condiment is the root of the *Cochleria Armorica*, one of the scurvy-grass tribe of plants; it acts as a powerful stimulant whether taken or applied externally; a poultice of the scraped root may be used instead of a mustard plaister; its therapeutic effects are diuretic, emetic, and sudorific, as well as stimulant, and these are communicated partially to boiling water, but entirely to spirit. It is chiefly administered in paralytic affections and chronic rheumatism, the dose of the fresh root being from 1 to 2 drachms, scraped or shredded, as we take it with roast meat. The Compound Infusion is made by pouring on 1 ounce each of the shredded Root and of bruised Mustard Seeds, a pint of boiling Water, and letting it stand in a covered vessel for two hours, then strain, and add 1 ounce of the Compound Spirit of Horse Radish, which is prepared thus:—Mix 20 ounces of the shredded root, the same of dried Orange Peel, 5 drachms of bruised Nutmegs, and 1 gallon of Spirit with 2 pints of Water; then distil a gallon over a slow fire. This is given internally in dyspepsia, and is applied externally in paralysis, being rubbed into the skin. The dose is from 1 to 2 drachms, and that of the Infusion from 1 to 3 ounces, three times a day.

HOSPITALS. These are among the most merciful and useful public institutions which have been established for the benefit of the poorer classes. Our own land, and especially London, can boast of some of the noblest establishments of the kind which are to be found in the world. Some are general, and some especially intended for peculiar diseases. We cannot pretend to enter into a full description of these several benevolent institutions, nor even to enumerate them; but have introduced the subject here, in order that we might say a word or two upon the unfounded prejudices and fears, as to Hospital treatment, which exist in many minds, and often, we fear, prevent persons from availing themselves of the inestimable benefits which they offer. There

the best medical and surgical skill can be obtained; there the most careful supervision; there the most appropriate and well regulated diet, and all the appliances which modern science furnishes; and it is folly to suppose that, as a rule, the patient is there treated other than carefully and tenderly. No doubt, nurses are sometimes cross and negligent; students not quite so decorous and thoughtful as they might be; and doctors, in the hurry of their overwhelming professional duties, short and sharp in their manners; but these are exceptions to the general rule, and should not be weighed in the balance for a moment against the gratuitous advantages offered to the sick and needy, who *cannot* obtain the food, the attention, and the skill so necessary to their cases at home. The following extract from Dickens' *Household Words*, in reference to a visit paid to St. George's Hospital, London, will serve to confirm the truth of our assertion, as to the kindness and consideration with which patients are generally treated at such establishments. The remarks apply but to one, but we quite believe it may be taken as a type of the class:—"A stranger's preconceived ideas of the sufferings of an Hospital are not at all borne out by the appearance of the patients generally: many of them are quietly reading the better-class cheap literature of the day; others are conversing round the ample fire. The little child with its leg in a splint is as merry as possible, with its bed covered with playthings. Everything that humanity can dictate, or to which art can minister, is supplied. The most eminent medical men, whose attendance sometimes the rich cannot purchase, watch the patient with all due art and skill; whilst carefully-trained nurses are at hand day and night to ease his tired limbs, or to sooth his racking pains."

That this is no overdrawn picture, all who have had anything to do with Hospital management can testify; and patients themselves, who have been partakers of these public benefits, should endeavour to remove the false impression, which prevails to a considerable extent, on this subject. Every good thing is liable to abuse; and these charities are, no doubt, sometimes misused and mismanaged, but not so commonly as is imagined. The supervision of those appointed to watch over them is too strict, and the public ear is too open, to permit of any long continuance of malpractices.

HOSPITAL GANGRENE. This is a combination of Humid Gangrene with phagadenic ulceration; it occurs in crowded hospitals, and is described under the head *Gangrene*.

HOURL-GLASS CONTRACTION. A transverse contraction of the uterus; so called because the organ assumes an irregular shape, something like an hour-glass.

HOUSE. How much the health of the community depends upon the situation, construction, and state of repair of the Houses which they inhabit, need scarcely, we think, in the present day of "Sanatory Commissions" and "Health of Towns Associations," be insisted on; and yet, great as have been the improvements of late in the dwellings erected for men, there is much room for more, especially in those of the lower classes. We merely glance at this subject incidentally, for it is one into which we cannot fully enter, and we have already in our articles on *Air*, *Drainage*, &c., furnished our readers with some hints thereon. Let us however briefly and forcibly impress upon those who are about to build a House, how important a consideration is the site which it is to occupy, as regards the health of its future inmates. Unfortunately, in the competition which is going on between builders, as among all other speculators, this matter is but little considered; every eligible plot of ground that can be obtained, is soon covered with bricks and mortar; no matter whether it lies low or high, what may be the nature of the subsoil, or the surrounding locality, so that it is within an easy distance of some great centre of activity, or offers some facilities for pleasure or business, the two great objects of life, as it is generally considered. To those who have the power of choice, we would say—never build a House in a low or damp locality; choose a dry gravelly soil if possible; if on a gentle declivity, so much the better, for here the natural drainage will be good; and let it be rather on the south or western slope of a hill, than on the north or eastern. Ascertain that the springs are pure and abundant, and if possible, secure sufficient ground to have your house isolated; go not too near chemical factories, or other sources of pollution, and build your house strongly and substantially, with walls of sufficient thickness to resist the attacks of all weather; and good timber and slated roofs, at a sufficient angle of declivity to prevent the snow or wet remaining lodged thereon. Let the rooms be lofty, well lighted and ventilated: it is astonishing what a good effect plenty of light has upon the health, and *vice versa*, how it helps to preserve "a cheerful mind in a sound body." Therefore, do not enclose your house with trees, to shut out the sunshine, and hide the prospect; we all love trees, as we ought to love them, for they are

among God's best gifts to man; but we should not have them too close to our dwellings. Have plenty of windows, then, but let them open mostly to the south and west; and well-constructed chimneys, that will not smoke—for smoky chimneys spoil both health and temper; (for more on this head see *Fire Place*).

Pity it is that the House of the poor man, should, as a rule, be so ill adapted for comfort, cleanliness, or health. Squalid, ill-lighted, badly ventilated, insufficiently drained, and crowded together in close low neighbourhoods, are the homes of our labouring population generally; and where this is the case, disease and immorality will prevail to a frightful extent. There is less occasion for this huddling together of multitudes now, than there was formerly, because distance from the place of employment is scarcely a consideration; a man may go from the factory or the workshop, to his home some miles away, in less time than it formerly took him to traverse a tithe of the distance; and there seems no reason why plots of ground contiguous to the railway lines should not be covered with neat little cottages, or model lodging houses, where the toilers and moilers of society might find all the comforts and enjoyments of home when their day's work is done. There can be no doubt that much of the well being of the state—the health of the whole body politic, as well as as of its individual members, depends greatly upon the suitability of the Houses of the land.

HOUSE LEEK. The *Sempervivum Leetorum* of botanists, a plant of the natural order *Crassulaceæ*: it contains malic acid, in combination with lime, and is considered cooling, astringent, and diuretic; its thick succulent leaves are sometimes applied to burns, stings of insects, ulcers, and inflammatory swellings; also, to corns and bunions with good effect. (See cut in opposite column).

HOUSEMAID'S KNEE. A formation of matter in the fore-part above the knee-cap, in consequence of inflammation set up by much pressure upon the part. Servants who are accustomed to kneel to their scrubbing and cleaning, and thatchers, who press the knee upon the ladder when at work, are especially liable to this affection, which is sometimes called a *White Swelling* (which see) and *Knee*.

HOWARD'S HYDRO SUBLIMATE. A patent Calomel, made by exposing the submuriate of mercury, in the act of sublimation, to aqueous vapour, and receiving it in water; the chief advantage of this is, that it cannot contain any corrosive sublimate; it is



lighter than the common calomel in the proportion of three to five. In the French Codex there is a similar preparation, which is known as *Jewel's Hydro-sublimate*. See *Mercury*.

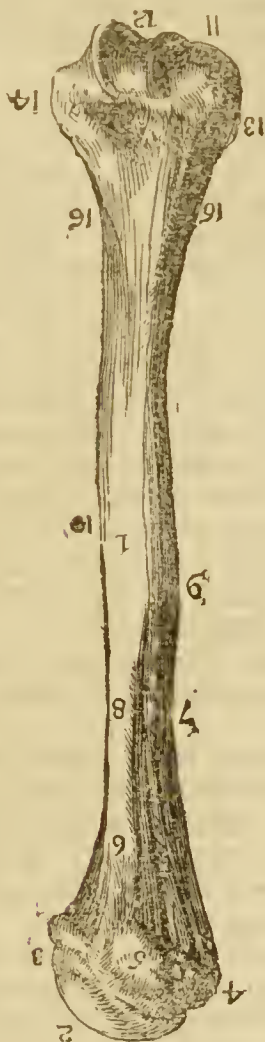
HUILE ACOUSTIQUE. The French name of a nostrum for the ear, made by boiling 1 drachm each of Garlic, Bay-leaves, and Oreganum, in 2 ounces of Olive Oil, for a quarter of an hour; strain and bottle for use. It is stimulant, and slightly astringent, and may be serviceable in some cases of Ear affection.

HUMAN FAT (Latin, *adeps hominis*). This is said to be sometimes used in the north of Europe in the preparation of ointments; it resembles lard in its appearance and properties. See *Adeps*.

HUMECTANTIA (Latin *humecto*, to moisten). A term sometimes applied to moistening and softening medicines or applications.

HUMERUS. Latin for the shoulder. Hence we have *Humeral*, applied to nerves, arteries, &c., belonging to the shoulder. We give a cut of the bone known to anatomists as the Humerus; it is long, and therefore divisible into a shaft and two extremities, as here represented; this cut shows the right side of the Humerus, on its anterior surface:—1. is the *shaft* of the bone; 2, the *head*, immediately below the base of which is the constriction called the *anatomical neck*, so named in contradistinction to the true neck, from being the seat of the accident called by surgeons, "fracture of the

neck of the Humerus" 3; the greater and lesser *tuberosities* are marked by 4 and 5; between them is a vertical furrow, called the *bicipital groove*, 6, which lodges and



protects the long tendons of the biceps; 7 and 8, are the *anterior* and *posterior* ridges of this groove; 9 is the rough surface into which the large triangular muscle, which forms the convexity of the shoulder, and is called the *deltoid*, is inserted; 10 is the opening called the *nutritious foramen*; 11, the *eminentia capitalis*, a rounded protuberance which articulates with the cup-shaped depression at the head of the radius; 12 is the *trochlea*, a concave surface which articulates with the ulna; projecting beyond this on either side are the *external* and *internal condyles*, 13 and 14, the two ridges of which are marked by 15 and 16; the *condyles* are rounded eminences, and running upwards from these, along the borders of the bone, are the *condyloid ridges*, of which the external is the most prominent, although, from the position of the bone in the diagram, the internal one, 16, is most plainly seen; 17 is the fossa for the coronoid process of the ulna, a depression into which it is re-

ceived during the flexion of the forearm; (for a cut of which, see *Fracture*).

HUMIC ACID (Latin *humus*, earth). An acid discovered in loam and peat earth, and in most vegetable barks: it is sometimes called *Ulmic Acid*, and its basis is termed *Humine*, or *Ulmine*.

HUMOR (Latin *humeco*, to be moist, from *humus* the ground). Applied to the aqueous parts of the body, and sometimes to the liquid excretions, generally; but especially those of the skin. The Humours of the Eye are of three distinct kinds: 1st, the *aqueous* or watery; 2nd, the *crystalline*; and 3rd, the *vitreous* or glassy. The two first contain about 80 per cent. of water, with albumen, muriate and acetate of soda, pure soda, and mineral waters; the third contains also 36 per cent. of a peculiar matter, like albumen. See *Eye*.

HUMORAL PATHOLOGY. Is a system of medicine which attributes all diseases to morbid changes in the humours or fluid parts of the body, and altogether ignores the influence of the solids.

HUMORIC. This is a term applied by M. Piorry to a peculiar sound produced by percussion in the stomach. When this organ contains much air or liquid, it resembles what Laennec describes as the metallic tinkling. See *Percussion*.

HUMULUS LUPULUS. The scientific name for the *Hop* (which see).

HUNGER. When we desire food we are said to be hungry, and this is an instinctive sensation, of which we are conscious when the stomach is empty, and there is a cessation in that constant supply of nutrition and stimulus which the whole system requires to maintain a state of healthful activity. "Whatever," says Dr. Alison, "be the conditions under which the nerves of the stomach become the seat of these sensations (of hunger) it is certain that, in the healthy state, they are a true index, not only to the state of the stomach, but to the immediate wants of the system at large." Not always, however, do these nerves—these sentries of the brain—convey true, or any information, they may sleep at their posts, deadened by narcotics; or they may be surprised and overpowered by strong mental emotion, such as fear, joy, grief: they may be seized and pinioned by a strong will, evoked by some absorbing desire, or pursuit of the mind. Thus philosophers like Sir Isaac Newton, deep in experimental research, forget that they have not dined; thus poets and lovers are said to live upon air; and thus those who fly from a threatened danger; who with indomitable energy strive to overcome

mighty obstacles; or who, with excited passions, fiercely struggle on the battle field, feel not the want of food until the desire is accomplished, the work concluded, or they sink exhausted by their efforts. Sometimes the sentries may give a false alarm, proclaiming a want when want there is none, and simulating hunger: sometimes they are too credulous and easily satisfied, saying we have it, when they have it not; thus we meet with persons who are always hungry, even directly after taking food, and we know that hunger may be for a time appeased by swallowing substances that cannot be digested, and which, therefore afford no nutriment to the system: all these conditions, however, are incompatible with sound health, in which state, at periods occurring with tolerable regularity, the sensation of Hunger will be felt. How, and when this should be satisfied, our readers will find fully set forth under the head *Food*, to which, and also to those on *Aliment*, *Appetite*, and *Diet*, we refer them, with the wish expressed by Shakspeare—

“May good digestion wait on appetite,
And health on both.”

HYALOIDES (Greek *yalos*, glass, and *eidos*, likeness). The membrane which contains the vitreous humour of the *Eye* (which see).

HYBERNATION (Latin *hyberna*, from *hyems*, winter). The condition of torpor in which the cold season is passed by some animals, such as the dormouse, hedge-hog, &c. Bats, also, do this; and not only do they sleep through the winter, but they also remain in a partially torpid state during the day, and only resume their activity as evening approaches, and this is called *Diurnation*.

HYBOSIS (Greek *ybos*, curved). The ancient Greek name for lateral curvature of the *Spine* (which see); it has been called by Dr. Good, *Rachybia*, and by Swediaur, *Hyboma Scoliosis*.

HYDATID (Greek *ydates*, a vesicle, from *ydor*). Any pellucid cyst which contains a transparent fluid developed in a tissue or cavity of the human body, &c. We now generally apply the term to an order of intestinal worms of which there are several genera, as follows:—1. *H. accephalocystis*, the Headless Hyatid; 2. *H. cœnurus*, a form in which several Hyatids are grouped together, having but the tail; *H. cysticercus*, the bladder-tailed Hyatid; *H. ditachyceros*, the Hyatid with a rough, two-forked horn; *H. echinococcus*, the round, rough Hyatid; *H. polycephalus*, the many-headed Hyatid. There is also a white en-

cysted body considered by some as a new genus: Raspail called it the *ovaliger* of the joint of the wrist. See *Worms*.

HYDERUS (Greek *yderios*), literally water flux. The Greek name for *Diabetis* (which see); it has been also called Urinal Dropsy, **Urinary Diarrhoea**, and **Dipsacus**, from the thirst which accompanies it.

HYDRACIDS (Greek *ydor*). A class of acid compounds into which hydrogen enters as the acidifying principle, such are *Hydro-chloric* (Muriatic) *Acid*, the salts of which are called *Muriates* or *Hydrochlorates*; *Hydro-bromic Acid*, the salts of which are *Hydro-bromates*; *Hydr-iodic Acid*, salts *Hydri-odates*; *Hydro-fluoric Acid*, salts *Hydro-fluates*; *Hydro-sulphuric* (sulphuretted hydrogen), salts *Hydro-sulphates*; *Hydro-cyanic*, salts *Hydro-cyanites*, formerly called *Prussiates*, and several others.

HYDRAGOGUES (Greek *ydor*, and *ago* to expel). Medicines which have the power of increasing the secretions and excretions of the body, and of producing watery evacuations. See *Cathartics*.

HYDRAMNIOS (Greek *ydor*, and *amnius*). A morbid accumulation of the *liquor amni* (which see).

HYDRARGYRIA (Greek *ydor*, and *argyros* silver). A kind of hot eruption arising from the irritation caused in the system by the administration of mercury. It is sometimes called *Erythema Mercuriale*, and sometimes *Eczema rubrum*.

HYDRARGYRUM (in Greek *ydargyros*, water-silver). A name given to quicksilver on account of its fluidity and colour: this is the *argentum virum* of old writers. See *Mercury*.

HYDRATES. Chemical compounds of solid bodies and water, which still, however, retain their solid form: these are also termed *Hydroxures*, and *Hydro-oxides*: if water is not a constituent, the term used is *Axydrous* (which see). Dr. Thompson gives the following list of the Hydrates. 1. *Sulphur*, which is found native in this state; but most commonly precipitated sulphur is what we understand by the term: 2. *Metallic Oxides*, which are in the form of powder, and generally of an intense colour: 3. *Earthy Hydrates*, which are generally crystallized, although we sometimes meet with them as powders: 4. *Alkaline Hydrates*; crystallized alkalis: 5. *Acid Hydrates*, which are crystallized acids: 6. *Saline Hydrates*, any saline preparations, whether in the form of crystals, solid masses, or powders: 7. *Hydrates of Hydro-sulphurets*, which are the crystallized Hydro-sulphurets: 8. *Soaps*, in which there is always a considerable pro-

portion of water : 9. Tannin, with several other animal and vegetable solids.

HYDRATHRUS (Greek *ydor*, water, and *arthron*, a joint). This is the *spina ventosa* of the Arabian physicians, called by modern surgeons, *White Swelling* (which see), also *Knee*.

HYDRO. This Greek prefix forms the commencement of many medical terms ; it may mean the presence of water, as *Hydrin*, a watery pustule, or *Hydrocele*, the original signification of which was a watery tumour ; but it has now three several significations ; *H. congenita*, Congenital Hydrocele, a collection of water in the *tunica vaginalis*, with a communication between the cavity of this membrane and that of the *Peritoneum*, (which see), and *Vagina* ; *H. œdematodes*, an anasarchous tumour of the scrotum, called by French writers, Hydrocele by infiltration, (see *Scrotum*) ; *H.* of the *spermatic chord*, which may be either infused or encysted, in the first case involving the surrounding cellular tissue, in the other, leaving this unaffected ; *H. spinalis* ; (see *Spina bifida*) : *H. tunicæ vaginalis testis*, Hydrocele of the vaginal coat, (see *H. sarcocèle*) : *Hydrocephalus*, more properly *Hydrin-cephalus* ; this may be either *external* or *internal*, that is between the membranes, or between the ventricles, (see *Brain*) ; *Hydro-cystis*, an encysted *Dropsy* (which see) ; *Hydromancy* (Greek *manteia*, prophecy), an ancient superstition respecting the divining or prophesying power of certain springs ; for the practice of resorting to which for superstitious purposes, we probably owe the discovery of the medicinal virtues of mineral waters generally ; *Hydromel*, a name for honey diluted with water ; when fermented it becomes *mead*, or *metheglin* wine, the *Hydromel vinosum* of old writers, who also spoke of it as *Aqua mulsa* and *Meliceratium* ; *Hydrometer*, an instrument for measuring the gravity of fluids ; *Hydrometra*, Dropsy of the uterus, sometimes called *Hydrops uteri*, (see *Uterus*) ; *Hydro-pericardium*, Dropsy of the *Pericardium*, (which see) ; *Hydro-opthalmia*, Dropsy of the *Eye* (which see) ; this may affect the cavities containing the aqueous humours, in which case we call it *Hydrops camerae anterioris* ; or the vituous humour, when it is *H. corporis vitrei* ; or it may be an aqueous enlargement of the whole organ known as *Hydrophthalmia*, or *Hydrops oculi mixtus*, or *Buphthalmus*, meaning Ox-eye ; *Hydro-pica* is a name for medicines which relieve or cure *Dropsy* (which see) ; *H. pleuritis* is acute or chronic inflammation of the pleura, attended with effusion, (see *Pleu-*

ritis) ; *H. rachitis* is dropsy of the spine (which see), which may be either congenital, in this case it is *Spina bifida* ; or analogous to *Hydrinecephalus* ; *H. sarcocèle*, Dropsy of the tunica vaginalis ; *H. thorax*, Dropsy of the chest.

Then we have this prefix in chemistry indicating the presence of hydrogen, as in *Hydro-sulphuretted* compounds of sulphuretted hydrogen with the salifiable bases, as *Kermes mineral* (which see) ; *H. thionie* (Greek, *thion*, sulphur) a name given by some German chemists to sulphuretted hydrogen, or the Hydro-sulphuric acid of M. Guy Lussac ; *H. urets*, compounds of hydrogen with metallic bases. See *Hydrogen*.

HYDROCYANIC ACID, commonly called Prussic acid. See *Acids*.

HYDROGEN (Greek, *ydor* water, and *gennaio* to produce). A Gas so called from its entering largely into the composition of water ; it was formerly called *Phlogiston* or *Phlogisticated air*, sometimes *Inflammable air* : about 1 part of this gas to 2 of oxygen forms water ; that is by volume ; by weight it is 1 part of the former with 8 parts of the latter. 3 parts of this gas with 1 of nitrogen, by measure, forms Ammonia, or as it is sometimes called Ammoniacal gas or Volatile Alkali, or according to old writers Alkaline air. In combination with carbon, in the proportion of 2 parts to 1, it forms what is variously called Light Carburetted Hydrogen, Heavy Inflammable air, Gas of Marshes, Hydro-Carburet, Proto-Carburet of Hydrogen, and Bi-Hydroguret of Carbon. When the two gases are in equal proportions we have Bi-Per-Carburetted Hydrogen, Olefiant Gas, or Hydroguret of Carbon. In combination with Chlorine this gas forms Hydro-Carburet of Chlorine, or Chloric Ether ; with Iodine it forms Hydro-Carburet of Iodine, or Hydro-iodide of Carbon ; and with Bromine it forms Hydro-Carburet of Bromine. It also enters into the composition of Ether, Naptha, &c., and combines with Selenium, Phosphorus, Arsenic, Tellurium, Potassium, and Xanthogen. This is the least ponderable of all gasses, and the most inflammable ; although it is itself incapable of supporting combustion : if a lighted candle be put into a vessel containing Hydrogen, the gas itself will explode, and the candle will be extinguished ; no animals can breathe it and live, and yet we see that combined with another gas it forms that great necessity of animal existence, water. For further particulars on this head see *Gas*.

HYDRON CEPHALOID (Greek *ydor*, and

enkephalos, the brain, and *eidos*, likeness), Affections arising from intestinal disorder, and exhaustion; so called because in their symptoms they resemble *Hydrocephalus* (which see).

HYDROPATHY. This, as the word implies, is the treatment of disease by the use of water, both externally and internally, according to the modes recommended by Priessnitz, the introducer of the system, against which nothing can be said so long as it is confined within judicious bounds. But, like most of the modern pathies, which have, for a time, become the rage, too much has been claimed for it, and a great deal of mischief has resulted from its indiscriminate application. There can be no doubt that, for certain diseases, and under certain conditions of constitution, habit, and temperament, Hydropathy, is the very thing, and perhaps every thing, required; but most usually there is a dietary and medicinal course necessary to be combined with it. Wanting these adjuncts it has, in very many cases, signally failed; with them, as it is usually practiced, its success has been very marked, and Hydropathic establishments have been, and are, deservedly in great repute. Medical practitioners have, perhaps, too much neglected cold water as a curative agent, and depended too exclusively on drugs; it may be that one reason for this is that people are unwilling to pay for cold water, or advice how to use it; but are not so unwilling to pay for that same element when it is converted into medicine. Another reason undoubtedly is, the difficulty of properly carrying out a course of Hydropathic treatment under the ordinary circumstances of life. More personal superintendence is required than the medical man can give, more time than the patient can spare, and more conveniences than he or she possesses, or can well obtain. Hence the practice of Hydropathy is almost exclusively confined to those who specially profess it, and to the establishments built or fitted purposely for it, and certainly many truly wonderful cures have been performed there. The pity is that the expense renders them unavailable for the poorer classes—to many of whom they would prove of especial benefit.

There are three different modes by which this system is said to act, and experience and observation justifies the belief that such is the case: 1, The reduction of temperature, caused by the application of cold water, the use of which, for this purpose, is as old as medical science itself: 2, The healthy stimulus which it gives to the nerves, bracing them, and enabling them

to bear the changes of temperature especially incidental to our climate: 3, The production of a critical eruption which removes poisons that are either the result of disease, or which have been swallowed in the usual way: this, too, is no fresh fact in therapeutics; so that really Hydropathy is no new system. What Hahnemann did for Homœopathy, Priessnitz did for this kindred pathy; took the old foundations, and built thereon a superstructure of rules and prescriptions, adding, both for disguise and ornament, some fanciful theories, and then dignifying the whole by the name of a new system, and vaunting that it was sufficient of itself to cure all diseases that were curable; taking care, however, in the practice of it, to combine other modes of treatment where the above was likely to be insufficient.

Hydropathy, then, we find to be useful as an *antiphlogistic*, as a *tonic*, as a *critical remedial agent*: like Homœopathy it stands on a triangular basis; but its three points of support are sound, which is more than can be said for that system.

The processes commonly used, in the administration of the Water cure, are Baths, Compresses and Packings; the first of these in ordinary use, are of various degrees of temperature, ranging, in the majority of cases, between 50° to 60°, and sometimes going up to 70° or 80°; it is not uncommon for a patient to be transferred from a bath of one temperature to a bath of another; and it is sometimes, when the patient is sitting in a shallow, warm, or tepid bath, cold water is poured over the head and upper part of the body: much attention is paid to the exact degrees of temperature applied in these cases.

To dry the body, it is usual to employ a sheet, in which the patient is enveloped, in preference to towel rubbing, which exposes the parts, not under the process, to chilling evaporation. A certain regulated amount of exercise is enjoined both before and after. Of the baths there are a great variety; in some establishments the Shower and Douche Baths are chiefly used, in others only partially. Steam, Hot-air, and Vapour Baths are also much adopted.

Compresses are of various kinds; the most common is a piece of coarse linen saturated with cold water, applied to the skin, and covered over with dry cloths; the compress is re-moistened several times a-day, generally at the time of taking the bath. Sometimes a compress is worn all day, sometimes at night only; it may be over the greater part of the body, or only a certain portion, on the chest, or abdomen, or head, for which a wet cap is generally used.

There is also friction with wet towels applied, and what is called the Rubbing Sheet, standing or recumbent, and the Under Blanket Wet Friction. The Wet Sheet and Blanket Packing are the chief novelties in the system; they consist in folding the patient in the sheet or blanket, dipped in water and wrung out, and then covering him over with dry blankets; this is said to be equal to blood-letting in its power of reducing inflammation, and to act at once as an anodyne, a tonic, and an absorbent. No doubt can be entertained that it is an excellent antiphlogistic, and, as it may easily be used, we give directions for its application. Take all the coverings from a common bed, leaving only the mattress and a pillow; over these spread a couple of blankets and then the wet sheet, on which place the patient perfectly naked, and fold first the sheet, and then the blankets tightly round him, so that he is completely enveloped, all but his face; then heap on other blankets, and tuck them in tightly. If the heat-generating power of the body is not great, a feather bed may also be added to the covering; tuck a small towel or handkerchief under the chin, that the face may not be irritated by the blanket on which it rests, and allow the patient to be in this condition for any necessary length of time, which varies from a quarter of an hour to two or even three hours, allowing him to drink at intervals small quantities of cold water. When taken out of the packing, the body should be first well rubbed with wet towels, afterwards dried with a dry sheet, and, if able, he should then take a brisk walk; if not, he should be put into another bed, and well wrapped up.

It is in dyspepsia and hypochondriasis, neuralgic affections, and skin diseases, that Hydropathy has proved most advantageous; in the early stages of fever and inflammation it is also of great use: as it occasions considerable waste of the body, it is well suited for persons of full plethoric habits, those who are not so, ought, while under its influence, to take more nourishment than common. To weakly persons of a nervous temperament it is likely to prove a hazardous remedy, as they cannot bear the reduction of vital power which it causes. On the whole, we must confess, that it offers great advantages to those patients who are in circumstances to go through a regular Hydropathic course of treatment, especially if they have been what are generally called "free livers;" a plain diet, chiefly of milk, early hours of rising and retiring to rest, avoidance

of all stimulants, regular and sufficient exercise; these alone, without the good therapeutic effects of the bathing and rubbing, and active stimulating of the excretory organs, would prove highly beneficial. See *Baths, Water*.

HYDROPHOBIA (Greek for a dread of water). This is the well known canine or dog madness, whose chief symptoms are spasmodic contractions of the larynx, preventing the patient, although thirsty, from swallowing any kind of liquid; one of the most dreadful and fatal visitations that can affect humanity. It has been known to medical writers from the days of Hippocrates downwards, and described under a great variety of names, all having reference to the difficulty of swallowing, or to the horrible fear which possesses the patient, as expressed in the old names *aero-phobia* and *panto-phobia*, dread of air, and dread of all things. It is generally distinguished as *Rabiosa*, with madness, and *sine rabie*, without madness. From Dr. Watson's "Lectures" we copy the following description of this fearful malady, which in man is produced by inoculation with the saliva of an animal, generally a dog, infected with it. When a person has been bitten by a rabid animal, the wound if treated in the ordinary manner will generally heal readily enough; but "after an uncertain interval, which lies for the most part between six weeks and eighteen months, the following *symptoms* begins to be noticeable. The patient experiences pain, or some uneasy or unnatural sensation, in the situation of the bite. If it becomes healed up, the scar tingles or aches, or feels cold or stiff, or numb; sometimes it becomes visibly red, swelled, or livid. The pain or uneasiness extends from the sore or scars towards the central parts of the body. Very soon after this renewal of local irritation,—within a few hours, perhaps—but certainly within a very few days—during which the patient feels ill and uncomfortable—the specific constitutional symptoms begin; he is hurried and irritable; speaks of pain and stiffness, perhaps about his neck and throat; unexpectedly he finds himself unable to swallow fluids, and every attempt to do so brings on a paroxysm of choking and sobbing, of a very distressful kind to behold; and this continues for two or three days till the patient dies exhausted. Generally, the disease when it once sets in, and shows the peculiar hydrophobic symptoms, runs but a short and fierce course. The nervous irritability becomes extreme. The peculiar paroxysms of choking spasm, and sobbing, are excited not only by attempts to swallow liquids,

but by the very sight or sound of them. Even the passage of a gust of wind across the face, the waving of a polished surface, as of a mirror, before the eyes; the crawling of an insect over the skin is sufficient to excite irritation, and the peculiar strangling about the fauces in a hydrophobic patient. Death occasionally takes place within twenty-four hours after the commencement of the specific symptoms. But commonly it happens in the second or third day."

Sometimes, however, as we gather from this and other authorities, the patient may linger on until the seventh, or even eighth day, and the severity of the symptoms may so far remit as to allow of his swallowing liquids; but there is no well authenticated case of a recovery after this disease had decidedly manifested itself, although there is no lack of pretended remedies for Hydrophobia.

"We are sure," says Dr. Watson, "that the disease, by the inoculation of which Hydrophobia may be produced in man, is common in the dog, and that it has been communicated by the fox, the wolf, the jackal, and the cat." And he quotes the late Mr. Youatt, who probably saw more of the disease both in man and the lower animals, than any other person—at all events in this country, to the effect that the saliva of the badger, the horse, and the human being, have undoubtedly produced it: some affirm that it has been propagated even by the hen and the duck. Certain it is that all animals, even fowls, are susceptible of the disease, when bitten by a rabid dog.

The above quoted authorities do not believe that the malady is communicable by the infected saliva through an unbroken cuticle; to render it so there must be some abrasion or breach of surface; it is inferred that mere contact with mucous membranes is sufficient for its propagation, from the fact that persons who unknowingly applied their lips to objects in which the virus has remained and dried, have taken the disease. It has been said that Hydrophobia has resulted from the mere scratch of a cat, if so, the probability is that the creature's talons had become imbued with the venom when the paw was put to the mouth, as it frequently would be if that part felt hot or uneasy. The knowledge that the saliva of a human being affected with this disease is infectious, should teach us, while ministering to such an unhappy fellow-creature, and relieving his sufferings by all means in our power, to do so with due caution; the more especially as such patients are sometimes extremely violent, and prone to bite as a dog would.

Does it follow then, that all persons bitten by a rabid dog or other animal, must die? is there no hope for them? assuredly we would not promulgate such a doctrine as this. In the first place, a very small proportion of those who are so bitten have the disease at all; and this partial immunity has sufficed to establish a false reputation for many of the nostrums vaunted as infallible remedies. If the bitten person becomes not mad, the nostrum has saved him; if he dies raving it has not been rightly administered, and so the faith of believers remains unshaken, and quackery is triumphant. It has been calculated that the proportion of persons bitten who suffer from the disease is about one in twenty-five.

Treatment. As no positive cure has been discovered for this terrible disease, all efforts must be merely preventive; directly the bite has taken place, a free excision of the wound should be made, taking care that every particle of flesh that the saliva has touched be removed; then thoroughly wash the wound with tepid water, keeping up this application for a considerable time: some recommend stimulating dressings to the part, but the advisability of this is very questionable; better to let the wound heal than to keep the system in a state of irritation. If there is any doubt about the poison being all removed, a strong solution of lunar Caustic should be applied, or the Caustic itself; this is as likely to be as effective as the actual cautery, which some recommend. Mr. Youatt says he never saw the lunar Caustic fail, and it may be used at any time before the disease manifests itself, although the longer it is delayed, the less chance is there of success.

The alleviating measures to be resorted to when the disease has manifested itself are, the application of Ice to the spine and fauces; the inhalation of Chloroform, and Prussic Acid dropped on the tongue a drop or two at the time; injecting into the bowels 3 or 4 ounces of Starch Jelly with 2 or 3 grains of Morphine; and rubbing in about every four hours a drachm of Mercurial Ointment with 2 grains of powdered Opium. During the inability to swallow, food or medicine may be injected while the patient is under the influence of Chloroform. Some recommend tracheotomy to relieve the spasmodic contraction of the throat, but no good results have followed in the few cases in which it has been tried. When, as is often the case, the patient is violent, he should be restrained by a straight waistcoat, or some such contrivance, from injuring himself and others. Cold

affusion is a remedy always at hand, and one that has produced beneficial results; get some water at as low a temperature as possible, and pour it from a considerable height over the back of the head and along the upper part of the spine: this greatly reduces the action of the heart, and it is necessary to watch the pulse carefully during the process, and stop it as soon as it sinks in a dangerous degree. Sedatives and refrigerants must be mainly employed in these cases, as the patient is suffering under a violent excitement consequent on the introduction of a poison into the system, which excitement, if not subdued, will inevitably and quickly exhaust the vital powers. (See *Madness*).

HYDROPS (Gr. *ydor* and *ops*, the aspect or appearance). A term applied to the morbid accumulation of water in a cavity, or the cellular tissues of the body; it is distinguished as *H. abdominalis*, or Ascites; *H. ad matutum*, Diabetis; *H. articuli*, Hydarthrus; *H. cysticus*, Cystic Dropsy; *H. genu*, Dropsy of the Knee; *H. medullæ spinalis*, Hydrorachitis; *H. oculi*, Hydropthalmia; *H. Ovarii*, Ovarian Dropsy; *H. pectoris*, Hydrothorax; *H. pericardii*, Hydropericardium; *H. pulmonum*, Œdema of the Lungs; *H. scroti*, Hydrocele; *H. uteri*, Hydrometra; *H. sacci lachrymalis*, Dropsy of the Lachrymal sac. See *Dropsy*, and terms here used.

HYGEIA (Gr. *ygaino* to be well). The preservation of *Health* (which see). Hygeia, the goddess of health, of the Greek fabulists, is said to have been the daughter of Æsculapius, the god of physic; to her the matrons of old consecrated their locks; she is said by some to have been the same as Minerva, the goddess of wisdom. From this root comes the term *Hygeine*, the science of the preservation of *Health* (which see).

HYMEN, the Greek god of marriage. A name given to the crescentiform fold situated at the entrance of the vagina; after its rupture at marriage, the remains are termed *Carunculæ Myrtiformes*. See *Vagina*.

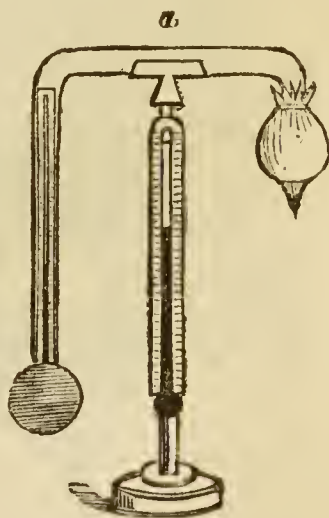
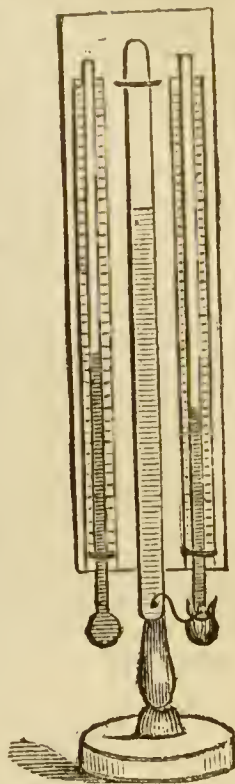
HYMENÆA COURBARIL. The botanical name of the tree which yields the resinous gum *anime*, frequently sold as amber (see *Anime*), of which or *animæa* the above name seems to be a corruption.

HYGRO (Greek *ugros*, moist). A prefix denoting the presence of moisture: as *Hygroma*, a humeral tumour; *Hygrometric Water*, that portion of humidity which gases yield to deliquescent salts.

HYGROMETER. This is an instrument to determine the amount of moisture in the

air. One much used is called the *wet bulb* hygrometer, and consists of two similar delicate mercurial thermometers, the bulb of one of which is covered with muslin, and is kept constantly wet by water, led on to it by a string from a tube in the centre. The evaporation of the water from the wet bulb reduces the temperature of that thermometer to which it is attached in proportion to the dryness of the air, and consequent rapidity of evaporation. The other thermometer indicates the actual temperature, and the difference being noted, a mathematical formula enables us to determine the dew point. But the most complete and beautiful instrument for this use is that of Mr. Daniell, which is here represented. The long limb ends in a bulb which is made of black glass; that the condensed vapour may be more easily seen on it. It contains a portion of ether, into which dips the ball of a small and delicate thermometer contained in the cavity of the tube. The whole instrument contains only the vapour of ether, air having been removed. The short limb carries an empty bulb, which is covered with muslin. On the support is another thermometer, by which we can observe the temperature of the air. When an observation is to be made by this instrument, a little ether is poured on the muslin: this evaporates rapidly, and the bulb becomes cooled. After a time, through the cooling agency, dew begins to deposit on the black glass, and the point at which this takes place is determined by the included thermometer.

HYOIDES (Greek *y* and *eidos*, likeness). A bone situated between the root of the tongue and the larynx, generally called *Oss hyoides*; the muscles attached to which are distinguished by names compounded of this Greek letter *y* or *hyo*—thus we have the



Hyo-glossus, which draws the tongue inwards and downwards. See *Tongue*.

HYOSCYAMUS. (See *Henbane*), the alkaloid extract from which is called *Hyoscyamia*.

HYPER (Greek, *yper*, over or above). This prefix, denoting excess, is applied to several forms of diseases, as *Hyperhæmia*, excessive fulness of blood; *Hyperostosis*, an enlargement of a bone, or of its membranous covering. The term is also applied to some chemical compounds, as *Hyper-Oxymuriatic Acid*, or, as we now say, *Chloric Acid*; its compounds are *Hyper-Oxymuriates*, or Neutral Salts, now called *Chlorates*.

HYPERICUM. Is a name given to the plant called St. John's Wort, from its supposed power over evil spirits. Of the natural order *Hypericaceæ*, there are several species, all of which are reputed to possess medical properties; the most common with us is *H. Perforatum*, which has a bitter,



resinous, and somewhat astringent taste. It has been used as a vulnerary, both externally and internally; and has been considered useful in hysterics, intermittent fevers, dysentery, hæmorrhages, chest complaints, worms, and jaundice. In France, Germany, Wales, Scotland, and some of our own rural districts, it is still regarded as, in some degree, a sacred plant; and was at one time especially used in the superstitious observances of St. John's Day.

HYPERTROPHY. Is applied to certain enlarged states of the tissues and organs, and signifies an excess of nutrition: thus

we have **Hypertrophy** of the Liver, resulting from an inordinate use of alcoholic stimulants, and commonly called Drunkards' Liver; and also enlargement of the accidental Eretille Tissues, consisting of capillary vessels in a state of Hypertrophy.

HYPNOBATES (Greek *ypnos*, sleep, and *baino*, to walk). One who walks in his sleep. See *Somnambulism*.

HYPNOTICS (Greek *ypnos*). Applied to medicines which procure sleep. See *Anodynes*, *Narcotics*, *Soporifics*.

HYPO (a Greek prefix, signifying under); hence we have the terms *Hypo-chondrium* (Greek, *kondros*, cartilage), the hypochondriac, or upper lateral region of the *Abdomen* (which see), and from this, *Hypochondriasis*, a state of uneasiness in that region generally proceeding from dyspepsia, and producing great lowness of spirits. The people of this country are said to be especially liable to this affection; hence Dr. Cheyne has termed it the English disease: suffering under it, a man is said to be *hypped*, or, as some would say, he is affected with the *Morbus literatorum*. It is rather a symptom than a disease, and is found, more or less, in all bilious and dyspeptic patients, especially in those of a cold and phlegmatic temperament. Active exercise, change of scene and air, sea-bathing, and proper attention to the biliary and other secretions, are the best remedies. We have in this affection a striking proof of the influence of the body over the mind.

HYPOCHYMA (literally, to pour out). A term applied by the Greeks to cataract, which they also called *Apochysis* and *Hypo-chesis*. The term seems to have been first used by the Arabian writers, although they more commonly called the disease *Gutta obscura*. This was the *Suffusio* of the Latins. See *Cataract*, *Eye*.

HYPO-GASTRIC. Belonging to the *Hypogastrium*, or lower anterior region of the abdomen, sometimes called the *supra-pubic* region, from lying above the pubis. The term *Hypogastric* is applied to the glands situated on the sides of the cavity of the pelvis, and also to a plexus composed of filaments from several nerves of the sciatic plexus.

The other medical terms to which this prefix is applied are *Hypo-glossal* (Greek, *glossa*, the tongue), the name of the *linguals*, or ninth pair of nerves, situated beneath the *Tongue* (which see). *H. gala*, *H. hæma*, *H. lympa*, *H. pyema*; effusion of milk, blood, lymph, or pus into the chamber of the aqueous humour of the *Eye* (which see). When there is an effusion

behind as well as in front of the iris it is called *Empyema oculi*; *H. spadias* (Greek, *spao*, to draw); a malformation of the penis, in which the urethra opens into the under surface. *H. sarca* (Greek, *sarkos*, flesh), a term used by Celsus for *Anasarca* (which see). *H. thenar* (Greek, *thenar*, the palm of the hand), one of the muscles contracting the thumb; *H. thesis* (Greek, *ypotitheni*, to put under): a system or doctrine founded on a theory or supposition is called an *Hypothesis*; that which is built upon conclusions drawn from a careful collection and examination of facts is, on the contrary, an *Induction*, which must be the basis of all true philosophy. In the treatment of diseases especially, should we be careful to avoid proceeding upon mere hypothesis; nothing but a close examination and comparison of facts can justify proceedings which involve the issues of life and death, although we often see the wildest theories brought to bear upon medical practice, and persons whose peculiar views, differing as they do widely from those of the great majority of the profession, and, therefore, one would think, open to suspicion, looked up to and followed as though they had exclusive admission to the temple of knowledge, by some unknown way, and been entrusted with some of her most valuable secrets.

HYSTERIA (Greek *ysteria*, the uterus.) A nervous affection chiefly seen in females, and generally connected with uterine irregularities; it is sometimes called *Clavus* or *Globus Histericus*, and is commonly known as *Hysterics*. As this is a very common affection, and one amenable to domestic treatment, it is desirable that we should devote some little space to a consideration of it. First let us observe, that the age at which there is the greatest proneness to Hysteria, is from that of puberty to the fiftieth year, that is from the accession to the cessation of menstrual life; at the beginning and end of which it is more frequent and marked than at any other period. Single women, and the married who do not bear children, are most subject to it, although it sometimes occurs at the early period of pregnancy and immediately after child-birth. Persons of studious and sedentary habits, and of scrofulous and weakly constitutions, are especially likely to be the subjects of Hysteria; as are indolent and plethoric persons, and those debilitated by disease, or excesses of any kind: it may be excited by excessive evacuations, suppression of the natural secretions, strong mental emotions, or sympathy with others so

affected. It is a curious circumstance connected with this affection that it simulates almost every disease to which humanity is liable. A patient suffering under Hysteria may have a rough, hoarse, croupy cough, loss of voice, hiccup, pain in the left side, fluttering of the heart, running at the eyes and nose, spasmodic contractions and convulsive movements of various kinds, vomiting, copious evacuations, delirium, and all kinds of violent and unmanageable symptoms, which subside as soon as the hysterical paroxysm does. All this shows that the whole nervous system is peculiarly influenced by the affection. An attack generally comes on with a sensation of choking; it seems as if a ball were rising in the throat and threatening to stop the passage of the air; then the trunk and limbs become strongly convulsed, so much so that an apparently feeble woman will require three or four strong persons to restrain her from injuring herself; then follows the hysterical sobbing and crying, with alternate fits of laughter; generally the head is thrown back, the face flushed, the eyelids closed and tremulous; the nostrils distended, and the mouth firmly shut; there is a strong movement in the throat, which is projected forward, and a wild throwing about of the arms and hands, with sometimes a tearing of the hair, rending of the clothes, catching at the throat, and attempts to bite those who impose the necessary restraint. After awhile, the deep and irregular breathing, the obvious palpitation of the heart, with the symptoms above enumerated will cease; there will be an expulsion of wind upwards, and the patient will sink down, sobbing and sighing, to remain tranquil for a shorter or longer period, at the end of which she may again start up, and be as violent as ever; or she may go off into a calm sleep from which she will probably awake quite recovered. A fit of Hysteria may last for a few minutes only, or for several hours, or even days; persons have died under such an infliction: it may generally be distinguished from epilepsy by the absence of foaming at the mouth, which is nearly always present in that disease, and also by the peculiar twinkling of the eyelids, which is a distinguishing symptom of great value, and a sign of safety. In epilepsy, too, there is complete insensibility, not so in Hysteria; the patient retains a partial consciousness; hence it behoves those about her to be cautious what they say; if any remedies are suggested of which she is likely to have a dread, her recovery may be greatly retarded thereby. In epilepsy there is laborious or

suspended respiration, dark livid complexion, a protruding and bleeding tongue; rolling or staring and projected eyeballs, and a frightful expression of countenance. Not so in Hysteria; the cheeks are usually red, and the eyes, if not hidden by the closed eyelids, are bright and at rest; the sobbing, sighing, short cries, and laughter, too, are characteristic of the latter affection. We point out these distinctions that no unnecessary alarm may be felt during a fit of Hysteria, which is seldom attended with ultimate danger either to mind or body, although the symptoms are sufficiently distressing to cause anxiety.

Treatment.—The first efforts must be directed to prevent the patient, if violent, from injuring herself; but this should not be done in a rude, rough manner. It is, perhaps, best to confine her hands, by wrapping tightly round her a sheet or blanket. The dress should be loosened, especially round the throat, and the face freely exposed to fresh air, and both that and the head well washed with cold water; if she can and will swallow, an ounce of Camphor Mixture, with a teaspoonful of Ether, Sal Volatile, Tincture of Assafoetida, or Valerian, may be administered; strong Liquid Ammonia may be applied to the nostrils; and if the fit is of long duration, an Enema injected, consisting of Spirits of Turpentine, Castor Oil, and Tincture of Assafoetida, of each half an ounce, in half a pint of Gruel. What is required is a strong stimulus to the nervous system; therefore, dashing cold water on the face, and hot applications to the spine, are likely to be of service. Sir A. Carlisle recommends that a polished piece of steel, held in boiling water for a minute or two, be passed down the back over a silk handkerchief. This has been found to prevent the recurrence of the paroxysm, which has before been periodic; by which it would seem that the patient has some power of controlling the symptoms, when a sufficiently strong stimulus is applied, to enable or induce her to exercise it.

During the intermission of attacks of Hysteria, attention should be devoted to any constitutional or organic defects, from which they are likely to arise; the patient's mind should be kept as tranquil as possible, and a tendency to all irregular habits or excesses held in check; if plethoric, there should be spare diet, and perhaps leeching; if scrofulous and weakly, good nourishing food and tonic medicines, particularly some form of Iron, the shower bath, regular exercise, cheerful company; antispasmodics, and re-

medies which have a gently stimulating effect, will frequently relieve the sleeplessness complained of by hysterical patients better than opiates and other narcotics. In such cases Dr. Graves recommends pills composed of a Grain of Musk and 2 or 3 Grains of Assafoetida, to be taken two or three times a day. When there is headache, dry-cupping at the back of the neck, or between the shoulders, will probably be of service. A change in the mode of life, involving entering upon new cares and duties, will frequently effect a complete cure of Hysteria, which, it has been observed, seldom attacks females of a vigorous mind. It is extremely desirable that, in the education of young females, the bodily powers should be well exercised and developed. Too little attention is paid to this generally, and the consequence is that a great many of our young women are weak and nervous, and frequently subject to hysterical affections.

HYSTERITIS. Is another term compounded of this Greek word *ysteria*; it signifies Inflammation of the Uterus; *Hysterocele* is Hernia of the Uterus, and *Hysterotomia* is another name for the Cæsarian section, or incision into the abdomen and uterus for the purpose of extracting the foetus. *Hysteroptosis* is a prolapsus or falling down of the uterus.

HYSTRIACIS (Greek *ystris*, a porcupine). Applied to an affection of the liver, which renders it thick, rigid, and bristly.

HYSSOP. *Hyssopus*, or *Gratiola Officinalis*, commonly called the Hedge Hyssop, or Poor Man's Herb; anciently known as *Gratia Dei*, Grace of God, from its supposed medicinal properties. It is found in most parts of Europe in moist places, but not in Britain, and is a popular domestic remedy in dropsy, jaundice, worms, chronic affections of the liver, scrofula, and various other complaints; but it should be used with considerable caution, as the fresh stem, leaves, and flowers, are violently purgative, and are likely to produce inflammation of the bowels, diarrhoea, and convulsions. When dried, they lose this property to a great extent, so that the Swiss, whose meadows abound with the plant, give it as fodder to the cattle. Orfila has seen dogs destroyed in a few hours after taking the extract of the plant, whose active properties appear to reside in a bitter resinous substance, called by chemists *gratioline*, which closely resembles the active principle of colocynth. The Hyssop belongs to the order *Cabiata*, it is supposed to be the *Zife* or *Cyfe* of the Arabians. (See cut at top of next page.)



ICE (Latin *glacies*). Water congealed at a temperature of 30° Fahr., which is called the freezing or congealing point; it is then called Ice, which is an agent of great value in the treatment of disease; it is the most ready and efficient means of abstracting undue heat from any part, especially the head. The best mode of application is to put it, coarsely pounded, into bladders, or elastic cushions; sometimes it is dissolved in water, with which cloths are saturated and applied, but in this way is not so effectual. As an internal remedy, Ice is given in hysteria and obstinate vomiting, small fragments being swallowed frequently, or allowed to dissolve in the mouth; in this way it is not only serviceable, but agreeable to the patient. In hydrophobia Ice has also been found serviceable; although only as a palliative, affording some comfort to the sufferer, who has thus been enabled to cool his parched throat, and in some slight degree to relieve his burning thirst. In scalded throat, from drinking boiling water, it is one of the best, safest, and most agreeable remedies, given as above directed, and it is sometimes useful in loss of voice. Indeed, wherever an anæsthetic agent is required, Ice, when it can be procured, is the very best; mixed with Salt, it is often used externally for neuralgic, and other affections of the kind.

Some caution is necessary in the application of Ice, as its action is very powerful, especially when applied to the head or

throat; in acute inflammation, and the active stages of fever, it may be borne for several hours; but if under its action the circulation becomes weak and languid, it should at once be taken off.

After numerous trials made with different salts for the purpose of converting Water in a tinned vessel into Ice during their solution, it has been found that equal quantities of Nitrate of Ammonia, Subcarbonate of Soda, and Water is the best mixture; 12 ounces of this produces, in three hours, 10 ounces of Ice.

ICES and ICED DRINKS. Very cool and pleasant in warm weather are the above luxuries, but we would not recommend our readers to indulge in them too freely, especially when the stomach is full, and the digestive organs ought to be in vigorous action, and for this the natural temperature of about 100° Fahrenheit is necessary; very cold fluids will reduce this 20 or 30 degrees, and thus, for a time, render the organs incapable of performing their proper functions, therefore the practice of eating Ice after dinner is decidedly injurious. *Immediately* after violent exercise, such as that of dancing in a heated room, Ices may be taken with impunity, if the constitution be not over delicate; if it is, they are at all times dangerous, but especially so when the body is fatigued. To the palate of the fever-parched patient, Ices are especially grateful and refreshing, nor is there any objection to his taking them in moderation; those flavoured with lemon and strawberry are perhaps the best. The following directions for Iceing may be useful to some of our readers, they are from "The Wife's Own Book of Cookery:"—Break almost to a powder a few pounds of Ice, and throw in among it a large handful and a-half of Salt; the Ice and Salt being in a bucket, put your cream into an ice-pot and cover it; immerse it in the Ice, and draw that round the pot so that it may cover every part; in a few minutes put a spatula or spoon in and stir it well remove the parts that are round the edges to the centre. If the Ice-cream or Water be in a form, shut the bottom close, and move the whole in the Ice; as you cannot use a spoon to this without danger of waste; there should be holes in the bucket to let the Ice off as it thaws.

ICELAND MOSS. This plant, the *Cetraria*, or *Lichen Islandica* of botanists, belongs to the class of lichens; it is parasitic, growing upon the trunks and branches of trees, and sometimes attaining a large size, especially on the lava soil of the west coast of Iceland, from which country, and Norway, our

principal supply is obtained; although it is also found amid the higher mountains of North Britain. As sold in the shops in a dried state, it has scarcely any odour, and



the taste is bitter and unpleasant. It may also be obtained in the form of a powder, or meal, which is of a whitish-grey colour. In Iceland this article is used extensively as an alimentary substance; the people of that barren country in allusion to it, say that it is "the gift of a bountiful providence, which sends them bread out of the very stones." "A porridge made of this lichen-meal is, to a foreigner," says Dr. Henderson, "not only the most wholesome, but the most palatable of all the articles of Icelandic diet." It is submitted to no other preparation than repeated steepings in cold waters, drying, and powdering; after which it is either made into cakes, or boiled in milk. Unless it is steeped, it is both offensively bitter, and also to many persons, purgative; hence it has been called *Lichen Catharticus*.

The excellence of Iceland Moss depends upon its freshness and freedom from impurities—these should be carefully removed before it is used. Soaking removes the bitter principle; retaining which it is tonic, stomachic, and febrifuge; without that it is simply demulcent and nutritive. It has acquired a high reputation as a medicinal agent in consumption, but we should not be inclined to place much reliance on its efficacy in such cases; probably it may help to sustain the system by the nutrition which it contains, and also to relieve those dis-

treasing pulmonary symptoms which mark the later stages of that most fatal disease. In Saxony the Iceland moss-meal has been extensively used in the making of bread; according to an estimate published by the Government of that country, 6 lbs. 11 oz. of this meal, boiled with fourteen times its quantity of water, and baked in this state, with $39\frac{1}{2}$ lbs. of flour, produced $111\frac{1}{2}$ lbs. of good household bread. Without this addition, the flour would not have produced more than $78\frac{3}{4}$ lbs. of bread; therefore, this addition of 6 lbs. 11 ozs. of lichen meal occasioned an increase of above 32 lbs. of bread—the drawback to this flattering statement is, that the increase was owing to the additional water absorbed by the meal.

The analysis of Berzelius gives as the constituents of Iceland Moss:—Starchy matter of a peculiar kind (called *lichenin*) 44.6; bitter principle (*cetrarin*), 3.0; uncrystallized sugar, 3.6; chiophylle, 1.6; extractive matter, 7.0; gum, 3.7; bi-lichenates of potash and lime, with phosphate of lime, 1.9; amylaceous fibrin, 36.2. Olsson asserts that a soup made with this meal is twice as nutritious as that prepared with flour.

Iceland Moss Jelly is made by boiling a $\frac{1}{4}$ lb. in 1 quart of Water down to a $\frac{1}{2}$ pint, adding $\frac{1}{4}$ lb. of Sugar, and straining.

ICHOR (Greek). A thin acrid discharge, which issues from wounds, ulcers, &c.; it is very commonly tinged with blood. From this root we also get *Ichorous*, a semi-purulent discharge, partaking of the nature of *Ichor*. See *Wounds, Ulcers*.

ICHTHYOCOLLA (Greek *ichthys*, a fish, and *kolla*, glue). The scientific name for isinglass, or fish-glue, which is prepared from the sounds and air-bladders of several kinds of fish, but especially of the great and small sturgeons (*Accipenser Huso* and *A. Sturio*). (See *Isinglass*). From the above root comes the term *Ichthyology*, that branch of zoology which treats of *Fish* (which see). Also

ICHTHYOSIS. Fish-skin disease; a papillary, indurated, horny condition of the skin. This is a very rare disease, which does not seem to be amenable to medical treatment. See *Skin Disease*.

ICTERUS (Greek *ikteros*). The Golden Thrush, a bird so called, on which, says Pliny, if a jaundiced person look, the bird dies, and the patient recovers. We now apply the name to *Jaundice* (which see). From the same root we get *Icteritia*, infantile jaundice; and *Icterodes*, a state of complexion resembling *Jaundice*.

ICTUS SOLIS (stroke of the sun). See *Coup de Soleil*.

IDIOPATHIC (Greek *idios*, peculiar; and *pathos*, an affection). A term applied to what we may call primary diseases—viz., those which are self-produced, if we may so speak; that is, they are not the result of others pre-existing in the system. These latter are called *Symptomatic*, or *Traumatic* (which see).

IDIOSYNCRACY (Greek *idios*, and *synkrazos*, composition). Individual peculiarities, hereditary or induced. In most individuals there are certain mental or bodily peculiarities, which we term *Idiosyncracies*; and these, to a certain extent, shape and fashion the life and mode of thought, and greatly influence the state of health. In reference to the latter subject, when we say that a man has a predisposition to gout or gravel, we allude to one of his Idiosyncracies, and we speak of the gouty or other state of that man as his *Diathesis* (which see). What are commonly called antipathies, are the peculiar result of states and conditions of the system, to which the above terms may be properly applied; and it is impossible to affix any assignable cause for these, nor can the medical man be aware of them until he has noticed them in their effects, or been fully informed of them by the patient or his friends.

To some persons a particular odour is perfectly unbearable; others cannot abide a certain sound: the sight of an insect, or other animal not obnoxious to most people, will make this or that person ready to faint away, and fill the mind with a nameless dread; these are idiosyncracies, such as Shylock, in Shakspeare's tragedy of "The Merchant of Venice," alludes to—

"Some men there are love not a gaping pig;

Some that go mad if they behold a cat," &c.

Then there are those in whom certain medicines produce an extraordinary and altogether unusual effect. We have known a few grains of any mercurial preparation, which would have little or no effect upon systems generally, salivate a person; and food pleasant and wholesome to most, act like a poison: again, we have seen a particular drug produce a totally different effect from the common one, such as an opiate producing restlessness instead of sleep, and *always* doing this, when administered; for we must distinguish between what are permanent constitutional idiosyncracies, and anomalous conditions of the system which arise from temporary causes. Individuals are often met with who are, in every other respect, perfectly healthy, and who have yet one or more of these peculiarities, which may perhaps be referred to some dietary or other

error in himself or his ancestors; for it is curious to observe how they are sometimes handed down from generation to generation. See *Hereditary Predisposition*.

IDIOTCY. (Greek *idiotes*; originally an ignorant person, one who practised no art or profession—as we consider it, a person deprived of sense, an imbecile). This is a state commonly attendant on a disordered or defective state of the brain; some make a marked difference between Idiocy and Imbecility, saying that one is congenital and the other acquired; but there seems, in truth, but little ground for this distinction, and the latter may be regarded as but a minor degree of the former; indeed, we may notice in idiots every shade of mental imbecility, from the faint glimmering spark which scarce lights its possessor to the mere satisfying his animal instincts, up to the very verge of reason, and all these defective mental conditions seem, contrary to the generally received opinions of a century ago, to be capable of improvement, by attention to the physical health, and the education of the faculties of the mind. That Idiocy is not a defect of the mind alone, but depends greatly upon physical influences, we have sufficient proofs, in the good effects produced by the strict attention to health, and cleanliness, and proper dietary regulations, which prevail in most of our asylums for the imbecile and insane. With regard to the cause of Idiocy, Dr. Forbes Winslow, in a paper read before the Medical Society, has remarked that "The great mass of idiots are said to spring from an unhealthy stock, and have either been the children of idiotic parents, or of those of vitiated organizations, of scrofulous diathesis, or of intemperate habits. Three hundred idiots were ascertained to have been the children of drunkards." Intermarriages of near relations is also assigned by this authority as one of the causes of Idiocy. May we not see by this what a tremendous responsibility rests upon parents—how carefully should they avoid all which may entail upon their children such direful results.

IGASURIC ACID. The name given by MM. Pelletier and Caventon to a peculiar acid, which occurs, in combination with Strychnia, in Nux Vomica, and in the Saint Ignatius's Bean (*Faba Sancti Ignatii*), from the native Malay name; of which plant the above designation is taken. The acid here spoken of is so different from all other known acids, that by some its existence is doubted.

IGNIS FATUUS (Latin, deceiving fire). A luminous appearance or flame seen at night

in moist or boggy places; it is caused by the liberation of phosphorus from decaying vegetable matter, and is commonly known as Jack-o-Lantern or Will-with-the-Wisp. It may be looked upon as a sure indication of unhealthy exhalations arising from the spot about which it appears.

IGNIS SACER (Latin for sacred fire). Commonly called St. Anthony's Fire (*Ignus Sancti Antonii*). This is the *Febris Erysipelatosa* of Sydenham, the Rose, a form of *Erysipelas*, (which see).

IGNIS VOLATICUS (Latin for flying fire). A term for *Erysipelas* (which see).

IGNITION (Latin, *ignis*). The effect of caloric, implying an emission of light from bodies which are much heated, without their suffering any change of composition. The point of ignition or red heat of most bodies is about 800° Fahr.; its highest point is a perfectly white *Heat*, (which see), and *Caloric*.

IGREUSINE. That portion of volatile oil which is odoriferous, and is coloured by treating it with nitric acid. Herberger called it *Elaiodon*, or *Elain* (which see).

ILEUS (Greek *eileo*, to turn about; in Latin *volvo*, hence *volvulus*). This is eos-tiveness with twisting of the bowels. (See *Iliac Passion*, and *Colic*); it has also been called *Chordapsus*, and *Miserere*.

ILEX. The Latin name for the Holm Oak, now the general term applied by botanists to the *Holly*, (which see).

ILIA (plural of *ile*, Latin, from the Greek *eileo*, to turn about). The flanks; hence we have the terms—*Iliac Arteries*, which are common where they are formed by the bifurcation of the aorta; in their after division they are termed the *external iliac*, and the *internal* or *hypogastric iliac*. *Iliac Passion* is another term for cold; *Iliac Region* signifies the region on each side of the Hypogastrium; the *Iliac Meso-colon* is a fold of the peritoneum, which embraces the sigmoid flexure of the colon; *Ilium os* is the haunch-bone; and *Iliacus internus*, a muscle situated in the cavity of the Ilium. Then again, *Ilio* is the prefix of terms applied to parts connected with the Ilium, or haunch-bone, as well as the small intestines, so called from the convolutions of which they are composed: thus we have *Ilio-lumbar*, an artery which proceeds from the internal Iliac, and divides into an ascending and transverse branch, which are distributed to the lumbar muscles; *Ilio sacral*, applied to ligaments connecting the posterior surfaces of the sacrum and ilium; *Ilio-femoral*, the designation of ligaments of the hip-joint; and *Ilio-colic*, the name of the

valve by which the ilium opens into the colon.

IMBECILITY (Latin *imbecilis*, weak). Weakness of mind or intellect. See *Idiotcy*.

IMBIBATION (Latin *imbibo*, to drink in). This is the act of imbibing, or absorption of a liquid into the pores of a solid. The physiological terms *imbilation* and *exudation*, or *transpiration*, are analogous to those of *inspiration* and *expiration*. Following the example of Dutrochet, however, we now generally speak of the imbibing and transpiring processes as *endosmosis* and *exosmosis* (which see).

IMITATION. The imitative tendency is one by which all persons are, to a great degree, influenced, but especially the young, and those of quick nervous sensibility; Hysteria, Epilepsy, and several other diseases owe their extension greatly to this influence, which is always, to some extent, involuntary, although it may be partially controlled by a strong action of the will. We should be, at all times, especially careful to guard the youthful and susceptible from aught which may improperly excite the imitative faculty, so as to prevent mischievous results; they have been known, when placed much in the company of one who stammered or squinted, or had some other unfortunate peculiarity, to contract the same *Habit* (which see).

IMPENETRABILITY (Latin *in* not, *penetro* to penetrate). The property by which a body occupies any space to the exclusion of any other body. It is generally conceived that all matter is penetrable, but properly speaking it is impenetrable; that which is called penetration being but the admission of one substance into the pores of another.

IMPERATORIA ASTRATHUM. A native plant of the natural order *Umbelliferae*, commonly called the Great Master Wort. It is aromatic and stimulant, and was formerly held in such high repute as to be termed the Divine Remedy, but it is seldom used now.

IMPERFORATE (Latin *in* not, *perforatus* bored through). A term applied to any part congenitally closed, as the *anus*, the *hymen*.

IMPERIAL. A pleasant cooling beverage, or summer drink, which may be made by putting $\frac{1}{2}$ an ounce of Cream of Tartar, with 4 ounces of Lump Sugar, and a few slices of Lemon, into a jug, and pouring on it about three pints of boiling water, and letting it stand until cool. This may be taken generally in feverish conditions of the system; sometimes, however, it produces irritation in the kidneys, attended with pains in the loins, and, in this case, should be discontinued.

IMPETIGO (Latin *impeto*, to infect). Various kinds of pustular skin diseases come under this denomination, but it is most usually applied to Yellow-crusted Tetters, or Yellow Scales; it is characterised by clustered pustules, terminating in a thin yellow scaly crust. See *Scale*, and *Tetters*, also *Skin Diseases*.

IMPLICATED (Latin for intertwined). Old medical writers applied this term to those parts of physic which have a necessary dependence upon each other; but the moderns, following Bellini, apply it more significantly to fevers, where two at the same time afflict a person, either of the same kind as a double-tertian, or of different kinds, as an intermittent-tertian, and a quotidian, or as we sometimes say, a semi-tertian. See *Fevers*.

IMPLUVIUM (Latin *in*, and *pluo* to run). A shower bath; sometimes, also, applied to an *Embrocation* (which see) and *Bath*.

IMPONDERABLES (*in* not, and *pondus* weight). Agents which are destitute of weight, as *Electricity*, *Heat*, *Light* (which see).

IMPOTENCE (Latin *impotens*, unable). Incapability of sexual intercourse. This may be the result of some congenital defect, or of disease in the organs; but it most commonly arises from some functional or moral cause. The class of criminal indulgences involved in a consideration of this subject are such as we can but hint at here; to unveil their secrets would be to open one of the saddest and most degrading pages of the book of humanity. In all cases of impotence we would recommend an immediate recourse to a medical man; but by no means to place any confidence in advertising quacks, who fatten on the credulity of their fellow men.

IMPREGNATION. The act of generation on the part of the male. See *Conception*.

INANITION (Latin *inanco*; to empty). Emptiness from long fasting, exhaustion. See *Hunger*.

INCANTATION (Latin *incantio*, to enchant.) This was a mode of curing disease much practised in the old times of superstition, and is still so in some countries; it consists of certain charms and ceremonies, and is practised both with and without other medicines or remedial means.

INCARCERATION (Latin *in*, and *carcer* a prison). A term applied to some cases of hernia in the same sense as strangulation; more properly, however, Incarceration is applied to obstruction of the fecal matter, without injury to the texture or vitality of the bowels. See *Hernia*.

INCENSE. The gum resin of several

species of Juniper, so called because much used for sacrificial purposes. See *Frankincense*.

INCINERATION (Latin *incinero*, to reduce to ashes, from *cinis* a cinder.) The process of reducing to ashes by burning. The combustion of animal and vegetable substances for the purpose of obtaining their ashes as a fixed residue is very common in chemistry. By this process carbonates are generally formed.

INCISION (Latin *incido*, to cut). The act of cutting with the bistoury, scissors, &c. in operations and dissections. *Incisores*, from the same root, is the term applied to the cutting *Teeth* (which see).

INCOMBUSTIBLE CLOTH. A cloth woven of the fibres of asbestos, anciently used, as it is supposed, for wrapping round dead bodies when placed on the funeral pyre. The light gauzy dresses of ballet-dancers are now made unflammable by being subjected to a process of immersion in a solution of chloride of zinc. Since the introduction of crinoline, and consequent extension of ladies' skirts, several lamentable accidents have occurred by the dresses taking fire at the low grates which are now used in drawing rooms; it would be well therefore to make all ladies' dresses unflammable by some such process.

INCOMPATIBLE SALTS. We say that one substance is incompatible with another, when the two cannot unite in solution without a chemical decomposition. It is only, however, when the solution of these salts are of a certain density that this incompatibility exists. The following table from Henry's "Elements of Chemistry" may be useful in the compounding of domestic medicines, as showing what salts may be safely used, in combination, in a fluid form:—

1st, Fixed Alkaline Sulphates, incompatible with the Nitrates and Muricates of Lime and Magnesia; 2nd, Sulphate of Lime, incompatible with Alkalies, Carbonate of Magnesia, and Muriate of Barytes; 3d, Alum, incompatible with Alkalies, Muriate, &c. of Barytes, Nitrate, Muriate, and Carbonate of Lime, Carbonate of Magnesia; 4th, Sulphate of Magnesia, incompatible with Alkalies, Muriate, &c. of Barytes, Nitrate and Muriate of Lime; 5th, Sulphate of Iron, incompatible with Alkalies, Muriate, &c. of Barytes, Earthy Substances; 6th, Muriate of Barytes, incompatible with Sulphates—Alkaline and Earthy Carbonates; 7th, Muriate of Lime, incompatible with Sulphates, except of Lime, Alkaline Carbonates, Carbonate of Magnesia; 8th, Muriate of Magnesia, incompatible with Alkaline Carbonates

and Alkaline Sulphates; 9th, Nitrate of Lime, incompatible with Alkaline Carbonates, Carbonates of Magnesia and Alumina, Sulphates, except of Lime.

INCOMPRESSIBILITY. That property of a substance, whether solid or fluid, by which it resists being compressed into a smaller bulk. The ultimate particles of all bodies are supposed to be incompressible.

INCONTINENCE OF URINE (Latin *in* not, *contineo* to contain). This is very common among children, and may be ascribed generally, to weakness; although, in some cases, it is owing to want of care in the nurse or mother. It sometimes occurs in grown persons, especially in males, after an operation for stricture, or some disease of the urinary organs; and in females after childbirth; it may, then, be attributed to some mechanical defect which allows the urine to pass off as fast as it is secreted. See *Bladder, Urine*.

INCUBATION (Latin *incubo*, to sit upon). A term not only applied to the period during which the bird sits on her eggs, but also to the period occupied between the application of the cause of inflammation, and the full establishment of that process.

INCUBUS (same root as the above). A distressing weight during sleep, usually preceded or accompanied by a frightful dream. The patient feels as though grasped and pressed down by an irresistibly powerful hand, against which he struggles in vain; he strives to cry out, but cannot; painfully sits the dreadful weight upon his chest, and seems almost crushing it in. At length he awakes in terror, and starts up in his bed, like one that has obtained release from some great danger. This may proceed from various causes: such as lying in a cramped and uneasy position, great fatigue, mental irritation, or flatulency; but the most common cause is eating indigestible food. Dyspeptic people are very subject to this nightmare, as it is commonly called. The only remedies we can recommend are, avoidance of the causes above enumerated, and a careful attention to the state of the bowels. (See *Dyspepsia*), also *Ephialtes*, *Succubus*, which are but other names for Nightmare, and *Oncirodynia*.

INCUS (Latin for an anvil). A small bone of the internal ear, with which the malleus is articulated; it consists of a body and two crura. See *Ear*.

INDEX (Latin *indico*, to point out). The forefinger is so called, because it is most commonly used for pointing with. See *Fingers, Hand*.

INDIAN FIG. (Scientific name *Cactus*

Opuntia, or *Opuntia Vulgaris*). A member of the Cactus family, which has become naturalised in the south of Europe, to the



inhabitants of some parts of which, especially Sicily, its fruit is an important article of diet; it is a tree on which the cochineal insect feeds, and it is said that its fruit reddens the urine of those who habitually eat of it. See *Prickly Pear*.

INDIAN RUBBER. The inspissated juice of several American and Asiatic plants, which, when it first flows forth, is insipid, scentless, and of a yellowish white colour; but, on exposure to the air, it hardens, and soon becomes darker. There are various chemical properties which render this substance valuable, in both the fine and domestic arts; but its elasticity and imperviousness to water are its most valuable qualities. It is now, for many uses, superseded by gutta percha, but it is still extensively applied to such uses as the manufacture of waterproof sheeting, &c., elastic air, and water cushions, and *Beds* (which see.)

INDICATION (Latin *indico*). Circumstances which point out in a disease what remedies ought to be applied. A remedy is said to be contra-indicated when it is forbidden; from the same root we have also *Indicator*, a muscle of the fore-arm, by which the pointing motion of the fore-finger is effected.

INDIGENOUS (Latin *indigene*, a native). A term applied to diseases, animals, or plants, peculiar to a country.

INDIGESTION (Latin *in*, not, *digero*, to distribute). Interrupted, difficult, or painful digestion. There is nothing of which persons who are out of health so commonly complain as Indigestion, to which they attribute most, if not all, of their bad symptoms: the mischief, they say, is all in the stomach; and so, in fact, it very fre-

quently is ; and, knowing how mischievous are the results of functional derangements of this part of the system, they should be especially careful not to overtask or abuse its powers ; yet how little regard is paid to this important matter generally ! and we meet, as a natural consequence, dyspeptic grumblers at every turn. We have already, under the several heads of *Aliment*, *Digestion*, *Food*, &c., endeavoured to give our readers some idea of the nature and modes of operation of the digestive organs, and of the kind of ingesta best adapted for sustenance, and most easily digested and assimilated. We have now, therefore, only to speak of the causes, symptoms, and treatment of *Dyspepsia*, as Indigestion is frequently called.

First, as to the *causes* ; these are numerous : prominent among them are over-feeding, or under-feeding ; giving the organs either too much or too little to do, will enfeeble them, and throw them out of working order ; going too long between meals, or taking them too frequently, will have this effect if continued, as well as any irregularities of living ; excesses, or vicious indulgences ; sedentary habits, intense mental study and toil, over fatigue, or exposure to wet and cold ; undue mastication of food ; anxiety and distress of mind, or any great shock to the system, either of a physical or mental character ; inordinate use of alcoholic stimulants, tobacco, opium, or other narcotics ; all these, and many more, are causes of Indigestion, and one of the most common of them is eating in too great a hurry. "The food we take," says Dr. Watson, "should be well ground in the mill that nature has provided for the purpose. It is probable that the increased longevity of the modern generations is in some degree attributable to the capability of chewing food, which the skill of the dentist prolongs to persons having defective teeth."

We should bear in mind that whatever passes the stomach undissolved by the gastric juice—which cannot act on it sufficiently if it is not well masticated—goes through the alimentary canal in a similar state, and not only affords no nutriment to the body, but causes functional derangement, which, if continued, is likely to lead to absolute organic disease. In strong healthy persons, who lead an active life, such substances may do no great harm ; nay, if the bowels are sluggish, they may prove beneficial by acting as a stimulus—hence the utility of brown bread, which contains a considerable portion of bran ; but to those who have weak, or even but ordinary digestive powers, food

insufficiently masticated will, in the end, if not immediately, prove injurious : it will sometimes, when passed down the alimentary canal in this state, act almost like a poison, giving the patient no ease nor rest until it is got rid of, either by means of a strong purgative or an emetic.

The *symptoms* of Indigestion are almost as various as the causes ; habitual constipation, flatulency, acid eructations, with heart-burn and water-brash, loss of appetite, nausea, and vomiting, restlessness and fearful dreams, pains in the chest and weight at the pit of the stomach, headache and, by sympathy, all kinds of nervous pains. These are among the most common, and the mode of treating them is set forth under their several heads. We may, however, make a few remarks upon the general mode of *treatment* necessary to be adopted. If strong, active, and otherwise healthy persons are troubled with Indigestion, as is sometimes the case, stimulating purgatives should be first tried, combined with mercurials, if the biliary secretions are not as they should be : Rhubarb, Ginger, and Carbonate of Soda, about 10 grains of the first, and 5 of each of the second and third, taken an hour before dinner will be good ; or a 5 grain Rhubarb Pill, with, every other night or so, an alterative, in the shape of a 3 grain Blue Pill. The supper should be Gruel with a little Salt, and Brown Bread should be eaten regularly for a time ; about half a teaspoonful of Mustard Seeds swallowed occasionally will also be of service. The proper action of the skin as an excretory organ should be promoted by frequent washing and friction ; and all indulgence in strong drinks and rich food avoided. For weakly persons of sedentary habits, a light nourishing diet is required, with gentle aperients ; a glass of Bitter Ale with the dinner is good, or of Sherry or Port wine ; exercise and cheerful company, if it can be had, and plenty of sleep ; a pill composed of Ox-gall evaporated to a proper consistence, with Extract of Gentian and Aloes—say a drachm of each, and 24 grains of Sulphate of Iron, made into 24 pills, two to be taken every day, an hour before dinner, have been found beneficial. Dyspeptic people are often hypochondriacs, the one, in some cases, being the effect of the other ; they should have diversion, change of scene, something to make them forget their troubles, real or imaginary. Europeans who remain for awhile in warm climates, generally return dyspeptic ; that is in consequence of the enervating effect of the heat, and the excess of stimulus ge-

Generally taken, the stomach loses tone—the digestive organs become weak and inert; in this case, the Bath or other Chalybeate Water, will be the best resource, with a tolerably generous diet, but not too much wine and brandy; digestive dinner pills, and so forth; the bile is more generally at fault, therefore a Mercurial Pill now and then is required.

INDUCTION (Latin *inductio*). Introducing. In *electricity*, the effect of an insulating electrified body which tends to produce an opposite electrical state in surrounding bodies; similar to this is *Magnetic Induction*; and *Electro-Magnetic Induction* is the production of magnetism by electricity in motion. See *Electricity* and *Magnetism*.

INDURATION (Latin *induro*, to harden). This is the effect of chronic inflammation, producing an increase in the natural consistence of organs; it is opposed to *softening*, or as the French say, *ramollessement*.

INERTIA (Latin *iners*, sluggish). Sometimes erroneously called *vis inertia*, these two words contradicting each other. The above term is applied to express the inactivity or opposing force of matter, with respect to rest or motion. It is overcome by attraction, or by external force. Thus, then, in natural philosophy, we estimate the quantity of matter by that of its *inertia*, and we estimate the quantity of this latter, by that of the force required to put it in motion at a certain given rate.

In Surgery, we apply to term *inertia* to that condition of the uterus in which it does not properly contract after parturition; in that case we have uterine *Hæmorrhage* (which see).

INFANTS. As ours is a book especially designed for the mother and the nurse, the treatment of children is one on which we shall naturally be expected to dwell at considerable length. We shall, therefore, take the first stage of infantile existence as our starting point, and, in as brief and clear a manner as possible, explain the various operations and processes, means and measures, which are, or may be, necessary for bringing a child safely through the difficulties and dangers of babyhood. How great are these dangers is shown by the well-ascertained fact that nearly half the children born in this country die before they reach the age of five years; this is a fearful rate of mortality, and it would seem to indicate that, notwithstanding our high state of civilisation, there must be something very defective in the general run of our infant management: indeed, it has struck us as not unlikely that the too com-

mon practice of mothers in the upper, and sometimes in the middle classes of society, of delegating to others that most tender and delicate of the mother's duties, viz. suckling the child, may possibly have something to do with this high rate of mortality among infants, and we would impress upon such of our readers as are mothers, or likely to become such, that nothing but the most urgent necessity should induce them to forego the performance of this most pleasing and sacred duty. Even if the child have all the aids and appliances that wealth can procure—a healthy wet-nurse, and the most careful possible of *hired* superintendence—it can never have the same advantages, and the same chances of escaping the dangers which beset its early career, as if it drew nourishment from the mother's breast, was nursed in the mother's arms, and watched over by the anxious carefulness of the mother's heart. There are cases we know, and many, in which the child must of necessity be deprived of these advantages, and confided to the care of those who are not its natural guardians; but there are many more cases in which there is no real necessity for such deprivation—only “the usages of polite society require it.” Far “more honoured,” we would say, are such customs “in the breach than the observance.” Mothers! suckle your infants, if God has blessed you with the means of doing so; if you have health and strength, and can by any possibility do it, watch over your tender nurslings, and bind them to you so closely by the cords of natural affection, that no after change, or circumstance of life, shall be able to loosen those blessed ties. But this is a digression into which we ought not, perhaps, to have been tempted, and from which we must return to the more practical part of our subject.

Infant Management. Directly the little creature has entered upon the stage of existence, and has been washed and dressed by the experienced hands of a careful nurse; after the first feeble cry has been uttered—that cry that so thrills the mother's heart, it will be well content to be quiet for a while, wrapped in warm flannel, and placed in the maternal arms, or, if that may not be, between the blankets, or in the nurse's lap; there will be a calm breathing, and a flush of life spread over the tiny face; and the eyes, which have only once yet looked upon the world, will be closed in sleep. It is probable that, for many hours, the infant will be thus calmly sleeping, as motionless as Chantry's chiselled children; one can only tell it lives by the heaving of the chest,

and the colour in the slightly-parted lips and small lineaments; but at the end of some hours, sooner or later, there will be a slight restless motion, as the pulse of life grows stronger in the veins, and the demands of nature for sustenance are just beginning to be felt. The mother has, ere this, probably, sufficiently recovered her strength to be able to take the child to her bosom, and holding it there in a loving embrace, she counts every tiny pulsation with a delight which only a mother can experience. But she cannot yet satisfy the want of which the Infant is but half conscious, for unlike the lower animals, which can suckle their young directly they are born, the lacteal fluid will not flow from her breast until the end of the second, or sometimes, even the third day. It is concluded by some that the mouth of the Infant should not be applied to the breast until that period; but Dr. Marshall Hall says "Let this application be made as soon as the fatigue of labour is perfectly over, if the mother is doing well. The child's mouth is softer than that of the nurse. The secretion of the milk will be greatly excited, and the milk secreted will be equally gently removed. There will then be no milk abscess—no milk fever in many cases in which these must otherwise occur. If the Infant be not early applied, the breast becomes swollen, and the nipple drawn in; and nursing becomes at once difficult and painful to the mother, and a source of fretfulness to the Infant."

It is very common for a nurse to give to an Infant, a few hours after it is born, a very little thin, perfectly smooth Oatmeal Gruel; this affords the necessary nutriment, and excites a gentle action of the bowels, and has the effect of relieving them of a thick, dark-coloured matter, technically called *meconium*, which they contain at birth; a drop or two of Castor Oil is also given, with or without the Gruel; this, perhaps, is scarcely necessary, but there is no valid objection to it, therefore, if it is the nurse's usual practice, she need not be interfered with in the matter. If, at the end of the first day, no sustenance can be obtained from the mother's breast, a little lukewarm fluid, composed of cow's Milk and Water, in equal proportions, and slightly sweetened with Lump Sugar, should be given in a feeding bottle, with a prepared calve's teat, or a nipple of India-rubber fitted to it; by this the child's mouth becomes accustomed to the natural mode of obtaining nourishment; when this kind of food has once been given, it should be continued about every two hours or so, a

very small quantity at the time; letting the child, before each feeding, endeavour to obtain it from the mother's breast first; as soon as it can do this, of course all artificial food should be put aside—that is, if the flow of milk is sufficient; if not, the breast and the bottle may be used alternately, for awhile. Dr. Marshall Hall truly observes, that "the mother's milk and the mother's warmth are the proper sources of nutriment and heat to her own Infant; it should lie on no other breast and in no other arms." And certainly, for the first six or eight months of infantile life, no other than the natural nutriment is required, provided the supply of this be good, and sufficient in quantity; should this not be the case, the question of artificial food will have to be considered, unless a wet nurse is engaged, against which there are many objections, both economical and moral.

The following considerations are urged by Dr. Hall as to the morality of the employment of a wet nurse:—1. If she be a married woman, it is obviously exceedingly wrong to take her from her own husband, who, thus deprived of the comforts of his home, will be apt to wander into paths of vice. 2. If the wet nurse be unmarried, her own Infant may become the victim of her desertion. It is astonishing how fearful is the mortality amongst the children of the poor, when thus forsaken by their unnatural mothers.

It must be admitted, however, that the necessity for a wet nurse is sometimes imperative, in that an Infant may die for want of a nurse, it becomes an interesting question what plan may be morally and properly adopted.

It may occasionally happen that an unmarried mother shall lose her own Infant; in such a case her milk may be preserved in order that she may fulfil the office of wet-nurse.

In other cases, whether of emergency or otherwise, those who desire the services of a wet nurse, should take her together with her own Infant, enabling her by strict discipline in diet, air, exercise, rest, &c., to nurse both children. If married, she should be taken from her own home as little as possible. If unmarried, she should be received with her own Infant; and such is the most legitimate mode of proceeding; for thus she herself may be reclaimed from a course of vice and misery. If stout, she will be enabled to nurse both Infants; if otherwise, her own has the first, or rather only claim upon her." The observations of this authority upon Infant management are so good

that we are tempted to continue our quotations. "Every noble-minded and tender-hearted mother will desire to nurse her own Infant; and if she pursue the proper course of conduct, she will generally be enabled to do so. If it should really be otherwise, it may be well to consider whether the Infant should not be brought up by the hand. But if a nurse be chosen, it should be, if possible, on the principles laid down Nursing her own Infant, the mother becomes the watch over its growth and development; over its health and happiness. Have you never seen an Infant rickety because it was ill-nursed? Have you never known incurable and insidious diseases to steal in from a similar cause? Have you not an eye also to see that one Infant is happy and another miserable, although but an Infant? Be assured that it is the mother's fault if the Infant's limbs are crooked, or its mind unhappy; or, I had almost said, if its health be impaired. To every mother, then, is to be committed the care of her own Infant, in its largest, broadest sense. She is the first to submit herself to all those rules of diet, medicine, exercise and quiet, which are essential to insure her own good health. She is then to supply her own Infant with milk, and with warmth, and for this latter purpose, she should lay it by her own side in the night. She should, in the third place, become the superintendent of its health, detecting the first signs of indisposition, and seeking immediately for the remedy.

Nor does the mother's office terminate even here. But she will go on to superintend the development of its mental powers, its dispositions, and its affections."

Such is the language of the true man of science, and the philanthropist, with regard to a mother's office and duties, and it would please us well to quote, yet more, largely from this distinguished physician's "Letters to a Mother," but that our space is required for that which has a more practical bearing on our subject; Dr. Bull observes, "that one of the most fruitful sources of disease, in the early days of infantile life, is improper management in relation to diet, and a large proportion of the suffering and mortality which occurs during this period, arises from this cause alone;" and he points out very clearly and forcibly the necessity there is of nursing upon a regular plan to insure the present and future health of the child.

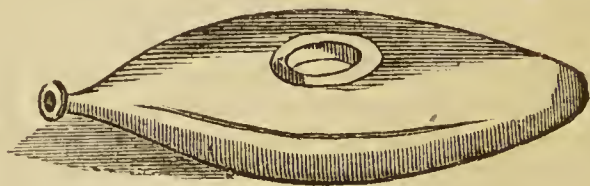
It has been well observed, that "Many nurses, acting upon the erroneous notion, that liquid food contains but little nourish-

ment, think it necessary to administer food often, and thus oppress the stomach, and excite vomiting; observing, again, that immediate relief follows the emptying of the stomach, they further adopt the notion that vomiting is a sign of health, and by this false reasoning are led to persevere in a course of positive mischief to the child. This can only be rectified by observing how long a child can suck vigorously, and what quantity it can take without this rejection of the food; each meal can then be gradually diminished, until the evil is remedied.

The position of the Infant during the time of feeding is of consequence; if fed from the breast, it will naturally be placed in a semi-erect position; and if artificially, it should also be slightly raised, and in the latter case, care should be taken to keep the body warm; for it should be remembered that, while suckled at the breast, it derives great warmth therefrom; in this position, too, it can swallow the food more comfortably than when laid flat on its back, and the nurse can more easily perceive when it has had enough.

It is a great error to give the Infant either the breast or the bottle too frequently; every three or four hours will be often enough in most cases: a child is not always hungry when it cries; there may be pain or uneasiness of some sort, and over-feeding will only increase the evil, although sucking may for a time keep it quiet; the digestive organs require rest with the young, as with adults, and indeed more so, on account of their being far more weakly.

It is desirable that we should say something here about *Feeding Bottles* and *Artificial Teats*, both of which are required for children brought up by hand: the bottle which has been most commonly used is of this shape—



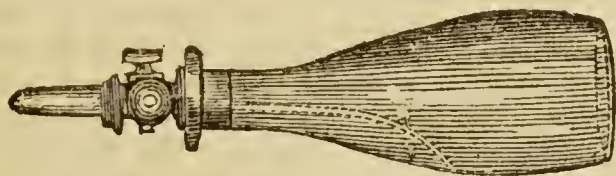
with a prepared calf's teat, or one of India-rubber, over the nose. Of late the use of this has been in some degree superseded by several new inventions, among which may be mentioned, as especially worthy of notice, Maw's Improved Feeding Bottle, with teat of prepared ivory or caoutchouc, and another by the same manufacturer, of which we give a cut, the first in next page.

These are both very good and useful articles; but we are inclined to give the pre-

reference to "The British Feeding Bottle," invented by Mr. Cooper, of 26, Oxford-street, London, which is represented below—



Its advantages are, as the *Lancet* truly states, that—"It may be placed in any position without the food running out. The supply of



food can be regulated, by means of a stop-cock, while the Infant is sucking, without removing the teat from the mouth, so that biscuit-food, or a single drop of milk, can be passed through, or the supply can be immediately stopped. Being electro-plated, on white metal, it may be instantaneously cleaned by washing in water. Unlike wood, ivory, or bone, it is impervious to water, and cannot become sour. There is no possibility of the Infant drawing air with the food, a frequent cause of convulsions. The whole is so simple that a child may be instructed to manage it."

We should observe that the teat of this bottle is of soft enamelled India-rubber, finely perforated to imitate the nipple, which can be instantaneously removed, washed, and wiped dry.

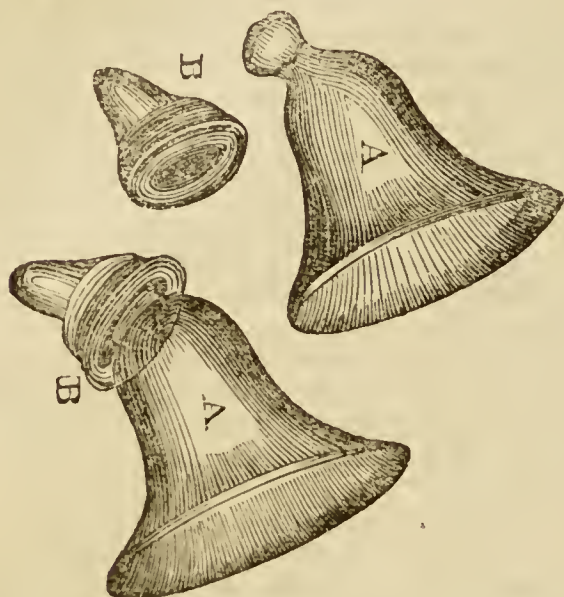
In a little code of instructions which Mr. Cooper issues with his bottle, he makes some remarks on *cleanliness*, which will equally apply to all contrivances of the kind:—"In rearing by hand the utmost cleanliness is indispensable, and neither the bottle nor the nipple should ever be laid aside without being thoroughly washed with hot water, wiped dry, and the mouthpiece not put into the bottle until required. A

bottle brush, an extra teat, and an extra bottle, in case of accident, should be kept in the nursery." Again, as to *quiet after meals*, we may quote with advantage from this little pamphlet:—"In whatever way the Infant is brought up, its treatment, after being nursed or fed, is far from being a matter of indifference. During the first few weeks of existence the Infant will fall asleep immediately after having the breast, and this, as being the order of nature, ought to be encouraged. If, from thoughtless gaiety or activity in the nurse, it be dandled, carried to the window, or otherwise excited, indigestion will be sure to follow, accompanied possibly by nervous irritation, colicky pains, or bowel complaints; even when so much sleep is no longer required, quiet for some time after feeding ought to be encouraged, as much bodily activity immediately after meals is unfavourable to easy digestion in a delicate constitution."

We quite agree with Mr. Cooper, that "milk ought to be the diet of Infants for a certain time, and *it alone* will be sufficiently nourishing for nineteen out of twenty children—perhaps ninety-nine out of a hundred. Fewer children would perish, if so fed, than are destroyed by rushing into the opposite extreme of feeding them with more viscid food; the use of farina or farinaceous foods for all Infants under the age of nine months, and even in many beyond that, lays the foundation of future disease; the powers of assimilation in an infant not being suited for such food. Milk alone is the natural food, and this should be pure, not skimmed, nor previously reduced by water—unless in the country, where the milk is particularly rich, and then it may be reduced with one-third of water; in warm weather the milk should be placed in the coolest place that can be found; and should there be the slightest tendency to acidity observed, it should be at once rejected; sweetening with sugar in such a case would but increase the evil." As to the *temperature* of the food:—"Our great aim ought to be to follow as much as possible in the footsteps of nature; and as we may observe that 96 or 98° Fahr. is the temperature of the mother's milk, so should we give it to the Infant; and for the purpose of regulating this, as well as the state of the atmosphere, a thermometer should be kept in every nursery. The milk should not be boiled, but a jug containing it may be placed in boiling water, and so the required heat retained."

Before quitting this branch of our subject

we think it well to advert to two useful inventions, viz. Taylor's India Rubber Tubes for Feeding Infants, which do not require to be tied on the bottles, and are adapted for any kind of bottle or food, however thick; and the Registered Nipple Protector, of which we give a cut.



A, represents a shield of glass having a socket; B, is an India rubber teat, which elings to the nose of the shield, perfectly air-tight; and by sucking which the milk is obtained, without giving any pain or suffering to the mother. The neck of the shield is bent diagonally to direct the teat conveniently to the child's mouth.

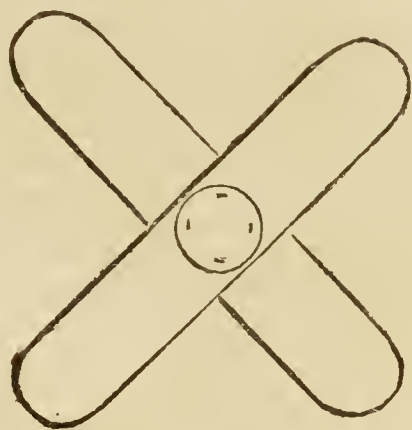
Having thus, as we imagine, said all that is necessary on the subject of food and feeding we will go back to the period of birth, and speak of other important matters, on which it is desirable that the mother or nurse should be informed. It sometimes happens after a protracted labor that the Infant, when brought forth, appears of a purple tint over the surface, and without the power to breathe, in this case; the nurse's finger, covered with a piece of thin linen, should be passed into the mouth to cleanse it of the viscid mucus which may obstruct the passage of air into the lungs; if the navel cord pulsates it should not be tied at once, but may be after the lapse of a few minutes, when it should be tied without further delay; in the mean time, efforts should be made to rescue the suspended animation in the child by patting it slightly on the back, blowing on its face, and placing its body in warm water up to the neck, taking care that the mouth and nostrils do not become submerged. Efforts should then be made to inflate the lungs by alternately breathing into the child's mouth, and then pressing upon its chest and abdomen, so as

to imitate the act of respiration; this last effort should be persevered in for a considerable time, as it has often proved successful in a child apparently born dead.

Electricity has sometimes proved a powerful agent of recovery in these cases; the great difficulty has been in obtaining a ready mode of application. Pulvermacher's Electric Chains appear to offer this, but we are not aware whether they have been successfully employed (see *Electricity*). We now come to *washing and dressing*: As soon as the Infant has been examined to ascertain if it be properly formed, and the umbilical cord has been properly tied, it should be washed in soft water, at a temperature of about 98, with soap and flannel, so as to remove the white unctuous matter which covers the skin; this should be done effectually, but very gently, care being taken to avoid fraying the skin; particular regard being had to the arm-pits and other folds of the body, into which, when the drying is properly effected, a little starch powder should be dusted by means of the powder puff; the drying should be done at a moderate distance from the fire to avoid scorching. The portion of the navel cord which remains attached to the child should be wrapped in a piece of soft linen, over which should be passed a binder of flannel about 6 inches wide, and long enough to go twice round the body firmly, but not so tight as to cause pressure, which might interfere with respiration; this binder should be fastened with needle and thread, and not by pins; and this caution will apply to all the wrappers or clothing of the child, then or at a future time. When all this is done, the child should be placed in a flannel receiver and wrapped up warmly, but not covered so closely as to cover the face and mouth; it should then be placed in a cradle to sleep, or better than this, on the bed by the side of its mother, whose natural warmth will be communicated to her Infant. On the question of first feeding we have already spoken, and as to clothing generally, it will be sufficiently obvious that it should be warm and loose, and easy to slip off or on: people used to swaddle their children up like mummies, and put them into small straight jackets directly they were born, but happily this absurd and pernicious custom has gone out of fashion, as in a great degree has the practice of dosing them with rue tea, sugar and butter, or stuffing them with soaked bread or gruel, long before their digestive organs were fitted for such heavy food. One more caution—no night caps; the little heads are plenty hot enough without artificial covering.

Nor should the cradle or bassinette in which the Infant sleeps be shut in too closely with curtains; good ventilation and plenty of fresh air is required, of course guarding against draughts and sudden changes of temperature. A hair, and next to that a cotton-wool mattress, is best for sleeping on, and it should be guarded against wet by a waterproof covering; light blankets should be used only, and sheets dispensed with, for a time at all events. The pillow should not be so large and soft as to allow the head to sink in, and thus generate heat and perspiration. After each washing, which should take place every night and morning, reaction should be promoted by gentle friction of the hand for a few minutes; allowing the child to stretch its limbs before the fire, although at a proper distance from it. The most scrupulous care should be paid to the state of the skin; as the matter which is conveyed away by this excretory organ would be likely, if retained, to act most injuriously upon the susceptible nervous system of an Infant. Another matter to be carefully attended to, in fat children especially, is the condition of the opposing surfaces of the skin in the creases and folds; troublesome sores, and much local irritation, acting prejudicially upon the whole system, are often the result of the chafing which here takes place if this be neglected; the moisture of such parts should, as before described, be absorbed by the starch powder, and a piece of soft linen spread with Spermaceti Ointment, and dipped in Elder-flower water should be inserted between the folds of the skin. The navel cord too, will require particular attention; that portion of it which is left attached to the child will separate from the navel, and drop off; it may be on the fourth or fifth day, or it may remain on until the twelfth or fourteenth; no attempt should be made to hurry this process; when it is completed, there is left generally just a puckered state of the skin in a good healthy condition; but sometimes there is bleeding and inflammation, which may result in ulceration. When there is much bleeding; the child most likely dies; attempts may be made to stop it by binding, and astringent applications, such as Vinegar and Water, or Alum lotion, but they are seldom of much avail. Sometimes a child's navel does not properly close, and then there is protrusion of the bowels as often as the child cries, or is in any way violently excited; in this case there should be placed, under the binder, a tolerably stout compress of linen so as to press lightly upon the aperture; this will be sufficient for the first

six weeks or so, but after that a more effectual remedy must be applied in the shape of a slice of cork, about the eighth of an inch thick, and sufficiently large to cover, and project some distance beyond, the aperture, padded to an inch thick with folds of linen, and affixed to two cross pieces of plaister as in the following figure:—



The plaister must be warmed, and stuck on the belly of the child, in the position here indicated; and the binder placed over it so that the cork covers and presses upon the opening of the navel. This apparatus should be renewed every two or three days; when there is inflammatory tendency, the cork will probably have to be removed, and linen pads only used for a time; or an air-pad of vulcanized India rubber may be substituted; (for the treatment of this case, see *Umbilical Hernia*).

When there is unusual fulness or swelling observed in the groin of a child, and especially if this be increased when it cries or exerts itself, rupture may be suspected, and an examination by a medical man should at once take place; (for treatment in this case, see *Rupture*).

Any malformation must, of course, be attended to by a surgeon. (See *Club Foot*, *Hare Lip*). A child may be "tongue-tied;" this arises from too great a prologation of the frænum, or bridle, which retains the tongue in its place: the surgeon's scissors will soon rectify this. *Nævus*, or "Mother's Mark," is not so easily got rid of; this may be of any size, from a scarcely perceptible point, to a blotch as large as half-a-crown; and it varies in colour from a bright red to a purple; it is composed of a network of capillary vessels which, if wounded, bleed very freely; it is sometimes cured by vaccinating on the spot, and sometimes the continued application of Iodine will remove it; the Compound Tincture applied night and morning being the best form; when the skin becomes sore, there should be a cessation for a few days. (See *Nævus*.)

In warm weather, an Infant might be taken out of doors when about a fortnight old; in winter it would not be prudent to expose it before it is at least a month or six weeks old, and then only if the day is fine, and for not more than twenty minutes; if an east wind prevails, the child should be kept in doors. Sleep should never be encouraged in the open air, nor should the glare of the sun be allowed to fall on its face; of course, the morning chill and evening damp should be avoided. When the Infant does go out let it be in the nurse's arms, *not in a perambulator*, that modern invention for the benefit of gossiping nurses, and for the destruction of infant life.

With regard to the *Diseases of Infants*, we may observe, with Dr. Marshall Hall, that the most frequent of these are—1, disorders of the stomach; 2, disorders of the bowels; 3, exhaustion; 4, febrile affections; 5, exanthematous diseases, or those which are attended with eruptions of the skin; 6, affections of the head; 7, diseases of the thorax, or chest; 8, affections of the abdomen, or belly.

Disorders of the stomach generally depend on improper diet; or they may be secondary, and the effects of a disordered or confined state of the bowels. They are often detected by acid or fœtid eructations and breath, or by the unusually frequent regurgitation or vomiting of food.

Disorders of the bowels can never be mistaken or overlooked by an attentive nurse, the evacuations, in their number and appearance, being the perfect index to these disorders.

It must never be forgotten, that whenever the system has been exposed to sources of exhaustion, this condition may become, in its turn, the source of various morbid affections which are apt to be ascribed to other causes, and treated by improper, and therefore dangerous, measures. If the infant has had diarrhœa, or if it has been bled by leeches; or if, without these, its cheeks are pale and cool; and if, under these circumstances, it be taken with symptoms of affection of the head, do not fail to remember that this affection may be the result of exhaustion. This important subject seems to have been generally misunderstood.

Fever is sooner detected. In every such case it is not advisable not to tamper nor delay, but to send for the medical man, and watch the little patient with redoubled care and attention.

Especially examine the skin, hour after hour, for eruptions. It may be measles or scarlatina, &c. It will be especially de-

sirable to detect these eruptions early, and to point them out to the physician. Above all things, let not a contracted brow, an unusual state of the temper or manner, unusual drowsiness or wakefulness, or starting, and especially unusual vomiting, escape you.

Be alive to any acceleration, or labour, or shortness of the breathing, or cough, or sneezing, or appearance of inflammation about the eyes or nostrils. These symptoms may portend inflammation within the chest, whooping-cough, measles. Pain of the body, with or without vomiting; or diarrhœa, with or without a morbid state of the bowels, or of the discharges, ought also to excite immediate attention. One caution should be given on this subject: some of the most alarming and fatal affections of the bowels, like some affections of the head, are unattended by *acute* pain or tenderness; their accession, on the contrary, is insidious, and it will require great attention to detect them early.

Another view, and another mode of the classification of the diseases of Infants, full of interest, full of admonition is—1, as they are *sudden*; or 2, as they are *insidious*; or 3, as they are, in the modes of accession, intermediate between these two extremes.

Of the sudden affections, are fits of every kind, croup, and some kinds of pain, as that of colic; of the second class are hydrocephalus, or water on the brain, and tubercles in the lungs or abdomen, constituting the two kinds of consumption. Fits, again, are cerebral, and arise from diseases within the head, or from irritation in the stomach and bowels, or from exhaustion; or they are evidence of, and depend on, some malformation or disease of the heart.

Domestic treatment should never be trusted in such terrific affections as these; not a moment should be lost in sending for the medical man.

If anything may be done in the meantime, it is—1, in either of the two former cases to lance the gums; 2, to evacuate the bowels by the warm water injection, made more active by the addition of Brown Sugar; 3, and then to administer the warm bath. An important point, never to be forgotten in the hurry of these cases, is to reserve the evacuations for inspection, otherwise the physician will be deprived of a very important source of judgment.

In cases of fits arising plainly from exhaustion, there need be no hesitation in giving 5 drops of Sal Volatile in Water;

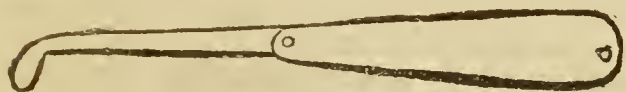
light nourishment may be added ; the feet must be fomented, and the recumbent posture preserved.

In fits arising from an affection of the heart, the symptom is urgent difficulty of breathing; the child seems as if it would lose its breath and expire. In such a case, *to do nothing* is the best course; all self-possession must be summoned, and the Infant kept perfectly quiet. Every change of posture, every effort, is attended with danger.

Sometimes the attacks assume the character of croup; there is a crowing cough, and breathing; or there is difficulty of breathing, and then a crowing inspiration. The former case is generally croup; the latter is, in reality, a fit dependent on a morbid condition of the brain or spinal marrow, although it takes the appearance of an affection of the organs of respiration.

In either case it is well to clear the bowels by means of the slow injection of from a quarter to half a pint of warm water, with or without Brown Sugar; indeed this is the most generally and promptly useful of all our remedies in infantile diseases. To this the warm bath may always be added, if administered with due caution. For instance, it should not be continued so as to induce much flushing or paleness of the countenance.

But in all the affections of infancy, whether sudden or otherwise, the suspicion should fall upon the condition of the gum



and of the teething, and therefore it is desirable that the mother should make herself acquainted with the use of the gum-lancet, of which we here give a cut.

In many cases of convulsions, and other infantile affections, the use of this instrument affords the simplest, quietest, and readiest means of affording relief. In any case of this kind, should there appear to be danger from delay, let the mother carefully pass her finger along the child's gum, and if it appears to be unnaturally tumid at any particular part, let her apply the instrument there. If the affection be a fit it may be used, whether any part of the gum is hard and swollen or not, simply as the easiest mode of relieving the system by blood-letting. A gum-lancet should always be kept, but should this not be at hand, a common lancet or a sharp pen-knife will do. Make a free incision along the course of the gum, down to the teeth or socket, if there

be none; have the child's head held perfectly still, and be careful to guard against pushing the instrument too far back, so as to wound the throat. The operator should remember that perhaps the child's life depends upon the due performance of this duty, and nerve herself for the task. For more particulars on this head (see article on *Teeth* and *Teething*).

There are many diseases to which Infants are liable, which are very insidious in their advance, and present at first no very marked symptoms; but the watchful eye of the mother, or of a careful nurse, can generally detect the approach and progress of such—the countenance, manner, gestures, and motions of the child; the peculiarities of its cry; the state of its secretions and excretions; all afford indications of this, and anything new or strange in either of these, is sufficient to give the alarm and excite inquiry. If there is a falling off in the looks, colour, and flesh of the child, there is reason to apprehend the formation of tubercles in the lungs—the harbingers of consumption.

The medicines and remedial means which must be kept for nursing, are few and simple. Rhubarb, Magnesia, and Manna for aperients, with Castor Oil and Calomel, but the latter to be very rarely and cautiously used; a few Senna leaves also, for infusion, may be useful. Ipecacuanha, Powder and Wine, as an emetic; and for cordials, Brandy and Sal Volatile, the former, for exhaustion generally; the latter, when this is connected with pain and irritation of the bowels. What shall we say about anodynes, but simply to warn against their use? except under the direction of the medical man, they should scarcely ever be given; nevertheless, it may be prudent to have at hand a small bottle of Laudanum, of which, in violent and excruciating pain, a single drop may be given. As a carminative, Dill Water is the best, to be combined, where there is much flatulency, with Fetid Spirit of Ammonia, this, with a little Carbonate of Soda for acidity of stomach; Aromatic Confection for loose bowels; and Poppies and Camomiles for fomentations, may complete the stock of medicines, which should be kept under lock and key, and only administered by the mother, or a nurse who can safely be trusted. But the warm bath, the injection, and the tooth-lancing, are the safest remedies, therefore, let the apparatus necessary for these, be always at hand and ready for use. We have thus, as we hope, indicated with sufficient clearness how to preserve the health of our Infant, or to detect the signs of disease, and to meet it when it comes. Every mother should be

ready to act on emergencies, but not ready to act on her own judgement, when professional advice can be promptly obtained; there is a pernicious habit of home doctoring of children, which cannot be too loudly condemned. Many a small spark of life has been quenched, and many a life cut prematurely short by supposed remedies, injudiciously administered.

INFANTICIDE (Latin *infans*, an infant, and *cædo*, to kill). The destruction of the child, either newly born, or in the course of parturition: when it is the destruction of the *fœtus in utero*, or in the womb, which is accomplished, we commonly call it *Fœticide*, or *Abortion* (which see).

The practice of Infanticide has prevailed to a fearful extent among foreign nations from very ancient times. Both among the Greeks and the Romans the exposure of infants to certain death was a common practice, and it is so still in China, in some parts of India, in South America, and Africa. In the islands of the Pacific it has prevailed to such an extent, as at times, when pestilence has contributed its influence, almost to depopulate them. Since the introduction of Christianity, however, there, as elsewhere, the revolting practice has in a great measure ceased. It was commonly the female children who were thus exposed, or those of the opposite sex who were deformed or sickly; and we can well understand that in rude and barbarous times, and among people whose chief occupations were war and hunting, why it might be thought expedient to put such incumbrances out of the way; and, in the absence of moral restraints and considerations of the value of immortal souls, of course nothing but expediency is thought of. In professedly Christian countries, however, where these higher considerations ought to have full weight, we fear that Infanticide is practised to a considerable extent: we speak not now of abortion, but of the wilful destruction of an infant after it is born; how a mother can so stifle her natural affections as to attempt this, one can scarcely imagine; but we know that it is done, notwithstanding the extreme severity of the law of most Christian countries, and the horror and abhorrence with which it is regarded: the incitements to the perpetration of the crime are—the trouble and expense involved in the keeping of the child, the shame and loss of reputation resulting from the discovery of its birth; and these motives with the dissolute and vicious are all-powerful. The establishment of foundling hospitals where the unhappy

fruits of illicit intercourse are received and cared for, has done much to diminish the crime of Infanticide; it is in France that these benevolent institutions most abound, and where they would seem to be most required, if we may judge from the ascertained fact, that in the capital of that country about one in five is the ratio of illegitimate births. One of the most difficult questions of medical jurisprudence is to establish the murder of a child lately born; it has first to be decided whether the infant was born dead or alive, and next whether its death was the result of violence or natural causes; if proved to have been alive at birth, and subsequently destroyed, either by violence or wilful neglect, the offence is murder, and may be visited by the severest penalty of the law. This consideration, if no other, should deter the abandoned mother from taking the life of her offspring, whatever may be the consequences of suffering it to live.

INFECTION (Latin *inficio*, to infect). The propagation of diseases by effluvia conveyed through the medium of the air. Infecting agents may be either specific poisons emanating from the breath or bodies of persons affected by particular diseases, such as small-pox, scarlet fever, hooping-cough, &c; or miasma resulting from the decomposition of animal or vegetable matter. The presence of some of these agents may be known by their peculiar odour, others only by their mischievous effects. It is held by some that noxious gases are not properly infectious agents, but that they act on the system so as to reduce the vital power, and render it predisposed to receive Infection, and it is questionable whether the reputation of acids, charcoal, chlorine, lime, &c., as disinfectants does not depend more on their property of decomposing the offensive gases which are often mixed in the atmosphere with the matter of Infection, than on any power which they possess over the matter itself. But, be this as it may, they should always be freely used in cases of fever and other infectious diseases; the most effectual of these is perhaps Chlorine, either disengaged in the form of gas, or applied in that of Chloride of Lime, or Zinc, sprinkled about the floor or on the walls of the apartment, or exposed to evaporate in shallow vessels. Dr. Henry gives it as the result of various experiments, that the infectious qualities of substances which cannot be conveniently washed may be sufficiently destroyed by exposure to a dry heat of 200° for not less than an hour. See *Contagion*, *Disinfectants*.

INFIBULATIO (Latin *infibulo*, to buckle

on). An affection in which there cannot be a retraction of the *Prepuce* (which see).

INFILTRATION (Latin *infiltratio*). The infusion of fluids into the cellular tissue of organs; this may be of four kinds: 1st. *Purulent*, of the nature of pus, such as occurs in the advanced stage of pneumonia; 2nd. *Sanguineous*, bloody, as in apoplexy, hæmorrhage; 3rd. *Serous*, as in Dropsy of the kind called *Anasarca* (which see); 4th. *Tuberculous*, which may be either grey or gelatiniform: this is the result of tubercles on the lungs or elsewhere.

INFIRMARY. An hospital or place where sick or infirm persons are lodged and nursed, free of expense to themselves or friends. This is a charitable institution supported, generally, by public contributions, or by the endowment of some benevolent person; there are many such in England, and the remarks which we made respecting hospitals will apply equally to them.

INFIRMITY (Latin *infirmitas*). Weakness, debility; an unsound state either of body or mind, commonly applied to that which is the result of old age, and rather to chronic than to acute and violent diseases; see *Weakness*.

INFLAMMABLE AIR. Formerly called Phlogiston, or Phlogisticated air. *Hydrogen Gas* (which see) and *Gases*.

INFLAMMATION (Latin *inflammo*, to burn.) This is a state or condition of the whole, or part of the body, whose external characteristics are pain, heat, redness, and turgidity. We generally find it expressed by the Greek termination *itis*, as Inflammation of the arachnoid, *Arachnoiditis*; of the bladder, *Cystitis*; of the brain, *Encephalitis*; of the intestines, *Enteritis*; of the iris, *Iritis*; of the kidneys, *Nephritis*; of the liver, *Hepatitis*; of the peritoneum *Peritonitis*; of the pleura, *Pleuritis*; of the stomach, *Gastritis*; of the tongue, *Glossitis*; of the uterus, *Hysteritis*; of the veins, *Plebitis* (all of which see). We speak of susceptibility to Inflammation as—1, *Original*, or innate; 2, as *Acquired*, as from habits, climate, &c.; and we distinguish the kinds of Inflammation as, 1, *Healthy*, or adhesive, that which disposes the parts to heal or cicatrize; 2, *Unhealthy*, that in which there is a contrary disposition to erosion, sloughing, ulceration, &c.; 3, *Common*, induced by common causes, as blows, incisions, punctures, &c.; 4, *Specific*, induced by inoculation, as syphilis, vaccina, variola, &c.; 5, 6, and 7, *Acute*, *Sub-Acute*, and *Chronic*, in reference to its stages of advancement; 8, *Phlegmonous*, that which is circumscribed and disposed to supuration; 9, *Erysipelatous*, that which

is diffused and less disposed to suppurate; 10, *Gangrenous*, that which leads to mortification or the death of a part.

Inflammation, again, may be either general or local, affecting the whole system, as in cases of fever, &c., or confined to a particular part or organ, as of the chest, or of the kidneys.

There are few diseases that do not present, at some period during their course, inflammatory symptoms, and in some they may be regarded with satisfaction rather than alarm, as indications of a healthy action; thus, in wounds and ulcers we would rather have redness, swelling, and a considerable degree of pain, than the livid, purplish look, and dull, dead sensation, which shows that there is a want of vitality; the reparative processes of nature in the animal frame are mostly the result of inflammation, which, however, becomes exceedingly dangerous when it runs high, and baffles the skill of the medical man to subdue it.

An attack of inflammation may terminate in any one of three ways—viz., by *resolution*, *suppuration*, or *mortification*. By the first, which is most common, we understand a gradual subsidence of the swelling, a diminution of the heat, pain, and redness, and an abatement of the fever—in short, a gradual return to the natural state and condition of the part affected; the second termination is when the inflammatory action goes on to the formation of pus; then we have a red, shining swelling, growing more and more so, and becoming soft in the centre, from whence, in due time, either through an artificial or a natural opening, the matter makes its escape (see *Abscess*); the third, the least common and most dangerous termination, is *Mortification* (which see). The first of these is of course the most desirable to be brought about, and where it cannot be, effusion of the watery part of the blood is pretty sure to follow; internally, we see this, in pleurisy and water on the brain; externally, in blisters, burns, and scalds.

The *causes* of Inflammation are as various as the diseases which properly come under the head of inflammatory affections; when general, affecting the whole system, it may originate in some specific infection, or from an exposure to wet or cold; and this latter may be the case, when the disease is confined to an internal organ, as the lungs or their investing membrane, the pleura, &c.; Inflammation of the bowels may arise from taking strong purgative medicines; and of the bladder from any thing which unduly stimulates or excites that organ; excessive

Indulgence in alcoholic drinks will often set up inflammatory action in the brain, and all matters which act as poisons, introduced into the system, owe their mischievous results in a great measure to this potent agency; skin diseases are all of an inflammatory character; and these are mostly contagious, or produced by contact. Any external injury, such as a cut, bruise, or burn, is attended with more or less of inflammation, and, in short, there are few forms and manifestations of disease into which this does not enter in one or other of the stages.

Of the general *symptoms* of Inflammation we have already spoken, but something more should be said on this head; besides, the more marked symptoms, such as heats, pain, thirst, redness, accelerated pulse, languor, shiverings, and other active febrile symptoms; we may notice that when the inflammatory action is confined to a particular organ, there is, simultaneous with the above, increased pain on the slightest pressure, so that even the clothes cannot be borne on the part affected; this is especially the case in Peritonitis or Inflammation of the covering membrane of the bowels, in which the patient often lies on his back, with the knees drawn up so as to keep off the weight of the bed coverings.

As to *treatment*, we can only here speak of that which is general; that which is specific or peculiar being described under the heads of the several inflammatory diseases or injuries, and of the organs liable to Inflammation, the manifestations of which in children are generally croup, whooping-cough, certain skin diseases, and hydrocephalus, or water on the brain. The young appear to be especially liable to inflammatory affections, owing probably to their rapid growth, which calls for a correspondingly quick and full supply of blood; and, of course the vigorous and healthy are for this reason more liable to such, than those in whom the circulation is weak and slow; hence the greater difficulty of treating fevers, &c. in children of full habit, and the necessity of guarding such from colds and other exciting influences. With children, general blood-letting is seldom resorted to, but leeches are among the most valuable auxiliaries of the medical man; unless the patient is thin and weakly they may be applied with perfect safety; but it should ever be borne in mind that the young have not that power of reaction which adults possess, and that it is not safe to carry the reduction by leeching, cold applications, and expectorants, cathartics, diaphoretics,

and diuretics, so far as with them, although all these may, and should be resorted to, if necessary.

With adults, the treatment of Inflammation should be bold and decided, especially if they be of strong constitution, and full habit; here we may bleed, and bleed freely, and practice other measures of depletion; the object being to relieve the congested vessels of the part attacked, to reduce the action of the heart, and lessen the nervous sensibility: low diet, aperient medicines, perfect quiet, and an avoidance of all excitement must be the rule in this case; promote perspiration, evacuation of the bowels, and flow of urine; by this means the impurities in the blood, and secretions, which always exist when disease attacks the system, are got rid of, and the way is prepared for a healthy action. Bleeding alone will not effect the desired object; for although this more speedily than anything reduces the arterial action, yet it is followed always by reaction, resulting in a greater flow of blood, unless some other depressing influence is brought to bear on the organ of circulation; therefore administer Tartar Emetic and Calomel, combined generally with opiates, refrigerants, and sudorifics, such as Opium, Digitalis, Hydrocyanic Acid, Ice, and cold lotions. When these have produced the desired effect, resort may be had to stimulants applied to the skin, so as to excite the capillary vessels, and also to a more nutritive diet, and cordial tonics: but all this must be done very slowly and carefully, or inflammatory action may be again set up, when the patient will be in too weak a state to bear further reduction. For forms of administration of the several medicines given in Inflammation, and other medical means to be adopted, see heads of diseases, and organs above referred to.

INFLAMMATORY CRUST. The buffy coat which appears on the crassamentum of blood, drawn when inflammation is present in the system, or when the patient is pregnant.

INFLAMMATORY BLUSH. This is a kind of non-contagious erysipelas, presenting red patches of an irregular form upon the skin; generally it is of short duration, but sometimes becomes continuous and troublesome, passing into pimples and small tumours, or into smooth shining spots, bounded by red margins, and appearing mostly on the breast, face, or arms. One variety shows itself in red patches on the fronts of the legs, with hard painful lumps assuming a blueish tinge after several days; this is peculiar to young women. The *red gum* and *tooth rash* of children are of this nature. See *Erysipelas*, *Erythema*.

INFLATED Latin *inflat*, to blow into). The state of the stomach and bowels when distended by flatus or wind. See *Flatulence*.

INFLUENZA. This is an Italian word signifying influence, supposed of the stars, or more probably of a peculiar state of the atmosphere, and it has been applied to an epidemic febrile catarrh, termed by the French, *la grippe*; formerly it was termed *coccoluche*, because those who suffered with it wore a close cap on the head. It has lately been very much the fashion to call any kind of cold which is accompanied with catarrhal symptoms, Influenza; but this, in nine cases out of ten, is a misnomer; the true disease seldom occurs except as an epidemic, attacking many persons at once; it comes on quite suddenly, and its symptoms are those of a general fever; there is great prostration of strength, generally showing loss of appetite, heat and thirst, cough and difficulty of breathing, owing to the air valves and bronchial passages being clogged with mucus; there is also running at the nose and eyes, weight across the brow with throbbing pain, and great depression of spirits. The febrile symptoms do not commonly last more than four or five days, sometimes but one or two, but the cough generally remains for a considerable time, varying according to circumstances, such as exposure to cold or wet, predisposition to cough, &c.

With the strong and healthy this is not a dangerous disease, but aged or weakly persons are frequently carried off by it. In the former case but little medical treatment is required. Keep the patient in bed, and let the temperature of the room be warm and equable; open the bowels with a gentle aperient, such as Rhubarb and Magnesia, or Senna Mixture, and follow this up with weak Wine-whey, or some warm diluent drink, in a pint of which a grain of Tartar Emetic and a drachm of Nitrate of Potash has been dissolved; give a wine-glass full of this about every four hours. It is not generally safe to practice much depletion, but where there is great difficulty of breathing, and irritation of the throat, a few leeches may be applied just above the breast bone, in the hollow of the neck. Stimulating liniments may also be applied to the chest, and Mustard poultices, but blisters are scarcely to be recommended. Hot fomentations may also be useful, and medicated inhalations, such as a scruple of powdered Hemlock or Henbane, sprinkled in the boiling water, from which the steam ascends into the throat. The fresh Leaves of the above plants may be used, or a drachm of the Tincture, if these cannot be procured.

When the fever is subdued, if there is still cough and restlessness, a 5-grain Dover's powder may be given at bed-time, or $\frac{1}{4}$ th of a grain of Acetate of Morphine, with a 5-grain Squill Pill, for the cough if required. If there is great feebleness, tonics must be administered; Infusion of Calumba, Cascarella, or Gentian, with Carbonate of Ammonia; 1 ounce of the former with 5 grains of the latter, three times a day, with a mildly nutritious diet — Broths, Arrowroot, Sago, and a small quantity of Wine. Such is an outline of the course to be pursued in most cases of Influenza which really require medical treatment at all; generally warmth, rest, and good nursing, will do all the business. Should the cough be very obstinate, and resist all efforts to remove it, change of air will generally prove effectual, and this is beneficial in most cases. See *Catarrh*, *Colds*, *Diaphoretics*.

INFRA (Latin for beneath). Hence we have the terms *Infra-orbital*, below the orbit, applied to a foramen, a nerve, &c.; and *Infra-spinatus*, below the spine, applied to a muscle of the scapula.

INFUNDIBULUM (Latin *infundo*, to pour in). A term applied to a small cavity of the cochlea, at the termination of the modiolus. (See *Ear*.) The membranous tubes which embrace the mammillæ of the kidney, and receive the urine from them, are termed calices, or cups, and *infundibula*; a funnel-shaped ligament in the spine, which joins the first vertebra to the occiput, has been called by Winslow *infundibuliformis*.

INFUSIBLE (Latin, *in* not, *fundo*, to pour); that which cannot be melted or fused so as to become fluid.

INFUSION (Latin *infundo*). The operation of pouring water, hot or cold, on vegetable substances, to extract their soluble and aromatic, or other principles. The beverage prepared from the leaves of the Tea-plant is the commonest example which we can adduce of a watery Infusion, to which, when made from other plants, it is not unusual to give the name of tea. Thus we hear of Sage and Camomile, and other teas. Most plants which possess medical properties are sometimes administered in the form of Infusion, the common method of preparing which is to pour boiling water upon a certain prescribed quantity of the substance, cover up, and allow to stand until cold before straining for use.

Infusion Jugs are made with a cover, and strainer across the spout; they are of brown or white ware, sometimes straight, but often in the ordinary form of a jug as here represented; it is a cheap and useful article, and

should be found in the cupboard of every good housewife; the quart will be generally



found to be the most convenient size. When this is not at hand, an earthenware teapot,



or any jug with a plate over the top to confine the steam and prevent too rapid cooling will answer the purpose.

The chief objection to Infusions, made in the manner above indicated, is their tendency to spoil rapidly, some of them, in warm weather, becoming unfit for use in 24 hours, or less. A successful attempt has recently been made to obviate this objection by preparing concentrated Infusions with cold water in a vacuum; but with these we cannot depend upon uniformity of strength, and they have frequently so much spirit in them that they are more like tinctures.

"Concentrated infusions," says Dr. Edwards in a Report of the Liverpool Pharmaceutical Society, "are, at the present time, much in use, especially amongst medical men who dispense their own medicines; and from the opinions he had heard them express upon the subject, he believed their experience would go far to justify their use. At present there was no recognized formulæ by which any of them were prepared; they all varied in strength; indeed, most makers allowed that their preparations were, when diluted, really stronger than those of the Pharmacopœia. They all contained spirit, varying in quantity from one-sixth to one-

sixteenth of their volume. Infusion of *rhubarb* might be taken as an example of the many formulæ used; some makers used hot water, others cold; some filtered when cold, and others while hot—variations which would make a material difference in the product."

The commonest and most useful Infusions are those of *Bueha*, *Calumba*, *Cascarilla*, *Camomile*, *Cloves*, *Gentian*, *Horse-Radish*, *Linseed*, *Orange-peel*, *Quassia*, *Rhubarb*, *Roses*, *Senna*, and *Valerian*; the proportions necessary for preparing which, their doses, and therapeutical effects, will be found under their several heads. There are many plants the active properties of which are not extraetable by simply infusing in hot water, and of these it is usual to make *Decoctions* (which see).

INGESTA. (Latin *ingero*, to heap in). Under this general head, we comprehend all that is taken into the stomach, whether as food or medicine, but common usage limits the meaning of the term to food, whether in a solid or liquid form. See *Aliment*, *Diet*, *Drinks*, *Food*, *Nutriments*, *Regimen*, &c.

INGUINAL (Latin *inguis*, the groin). Relating to the part between the abdomen and the thigh; hence we have *Inguinal Glands*, those situated in the groin, these are *superficial*, between the skin and aponeurosis; and the *deep-seated*, situated under the latter: hence too, we have *Inguinal Hernia* (see *Hernia*), *Inguinal Ligament*, that commonly known as *Pourpart's*, and the *Inguinal Ring*. Surgeons frequently speak of the groin as the *Inguinal region*.

INHALATION (Latin *inhalo*, to inhale). This term signifies the act of drawing the air into the lungs, and also to the volatile substances which are mingled with the air; in the latter sense it comprehends two classes as 1st, dry fumes, or perfumes, in Latin *soffitus*; and 2nd, watery vapours, Latin, *halitus*.

In modern medical practice, the administration of remedies by Inhalation, is used to a considerable extent, although not nearly so much as it was some years since; it has its peculiar advantages, and will probably always retain a place among remedial measures. There are some anæsthetic agents such as *Ether* and *Chloroform*, whose peculiar effects are only produced in this way, and there are narcotics, astringents, and other remedies for diseases which can only be applied to certain parts, to relieve local constriction, irritation, and the like. Besides the anæsthetics above mentioned, the agents chiefly used in Inhalation, are vapours

from hot water, either simple or medicated, Chlorine gas, the fumes of Iodine, and of Mercurials. In chest affections, such as consumption, where there is spasmodic cough, great relief is frequently afforded by the vapour of Boiling Water into which about 12 drops of Laudnum, and 6 of Chloric Ether have been put. In slight cases of laryngitis and bronchitis, and in sore throat, medicated Inhalations made with Poppy heads, Hops, Hemlock Leaves, or other anodynes, will frequently be of service. Medicated infusions or decoctions are the only Inhalations which can be safely recommended for domestic use; no others should be employed, except under the direction and superintendence of the medical adviser; one of the commonest and most useful forms is this:—take 3 or 4 Poppy Heads bruised, and a handful of Marsh Mallows, boil them in a quart of water for an hour, strain, and put the decoction steaming hot into a basin, over which invert a tin funnel, the pipe of which put into the patient's mouth, and let him inhale the steam: we have seen much relief afforded by this means in cases of quinsey and other throat affections; there has been a rapid relief of the overloaded vessels, which have been stimulated to increased action, whereby the circulation has been carried on more rapidly and effectually: hot Vinegar and Water, or Plain Water, may also be used in the same way with decided advantage. In asthmatic complaints, dry Inhalations, such as the fumes of Stramonium, or Tobacco, smoked in a pipe, is often advantageous, and toothache is sometimes relievable by placing Henbane seeds on a pan of hot metal, and allowing the vapour arising from thence to pass into the mouth; this, however, can scarcely be called Inhalation, as it is not necessary nor, indeed, desirable to breathe the vapour.

With regard to Chloroform Inhalation, so many deaths have occurred under the influence of this anæsthetic, that the advisability of its application is a disputed point with the profession. In hospital practice it is generally administered in all difficult and painful operations, and we are inclined to think that it should be so. We have here a means of lessening human suffering to a very great extent, and the risk, that the death of a patient will ensue from the shock, caused to his system by the intense and protracted suffering of an operation, is certainly as great as that incurred by the administration of Chloroform, if not greater. This observation will also apply with still greater force to cases of difficult and dangerous parturition; in common cases we

should scarcely recommend its administration. Mr. Coates, of the Salisbury Infirmary, in a work entitled "Chloroform, and its Safe Administration," states that by the use of Snow's inhaler, and the addition of a small moveable funnel introduced into one of the holes through which the air enters the chamber which contains the Chloroform, he is enabled to administer the anæsthetic in precise doses. He finds 15 minims every minute the safest and most effectual dose. Sometimes one dose is enough; but generally from four to six doses, making in all from one drachm to one drachm and a half, produce the necessary insensibility to pain. Mr. Coates acts upon the principle which might be more generally followed with advantage, of employing the smallest dose capable of producing the desired result. When the patient is weak, or alarmed, he gives a little undiluted brandy a few minutes before commencing the Inhalation. With regard to the comparative mortality before and since the introduction of Chloroform, Mr. Coates shows that at the Salisbury Infirmary, for six years previous to, and six years after, the introduction of this anæsthetic, the diminution of mortality has been equal to 16 per cent.

The cases, in which a non-professional person would be justified in employing so potent an agent as this, are so rare, that we scarcely deem any directions for its use are necessary; still, as the alternative might arise, of doing this, or giving up a victim to death, it will be as well to state the method of application, which is most simple, and easily adopted:—Take a white handkerchief, folded three or four times, and pour on it about a teaspoonful of Chloroform, then apply it immediately over the mouth and nose of the patient, not pressing it so tightly as to exclude the admission of a little atmospheric air; let two or three deep inspirations be taken, and then, if insensibility is not produced, without entirely removing the handkerchief, add about half a teaspoonful more of the Chloroform; this may be repeated several times, if necessary. A slight inhalation of this agent will be likely to relieve a person suffering from neuralgic pains, but great care must be taken not to carry it too far.

Various forms of Chloroform and other inhalers have been invented. We give cuts of two of them. The first is Pratt's Chloroform Inhaler; it is of simple construction, and well adapted for the intended purpose. The second is Maw's Improved Inhaler, with double valves for inspiration and respiration. See over.

The Inhalation of steam, by a person confined to bed, may be managed by simply putting some bran in a basin, pouring some



boiling water on it; and then, leaving the patient in a sitting position, with the head bent down, place the basin under his face



and envelope the whole in some covering which will confine the vapour, which must thus enter the mouth and be drawn into the lungs.

Inhalation of that which is hurtful or beneficial, is constantly going on with us, whether we are aware of it or not; in crowded cities we breathe all sorts of poisonous gases; in marshy and fenny districts we suck in miasma; in factories, where bleaching is carried on, chlorine enters the lungs, and thence into the circulation; and by the seaside, iodine; and, breathing an atmosphere impregnated with such medicinal agents as these two last we often doubtless receive more benefit than if we took them in full doses.

INHUMATION (Latin, *inhumo*, to inter). This term has been applied to the act of placing a patient in an earth bath, that is, burying him up to the neck in fresh earth; a barbarous and antiquated method of treating certain diseases, which is now scarcely ever practised in civilised countries, and therefore we need not occupy our space with a detail of the mode of operation and supposed effects.

INION (Greek for the nape of the neck, derived probably from *inos*, a sinew). The ridge of the occiput; hence we have the term *inial*, applied by Barclay to that aspect of the head which is toward the *inion*; the apposite aspect is called *ante-inial*. See *Neck*.

INJECTION (Latin, *injicio*, to cast in). A fluid intended to be thrown against, or into a part of the body by means of a syringe or other apparatus. Under the head of *Clyster* will be found the formulæ of the various compositions employed for this purpose; those which are intended for the bowels we commonly speak of as *Enema*; those for the urethra or other parts as *Injections*: these terms are, however, in general employed indifferently, to signify one or the other, as it happens.

Injecting apparatus are of various kinds; of those which assume the form of a syringe we shall give some account under that head; for domestic purposes a pig or cow's bladder, with a common bone pipe tied firmly on to the open part, so as to prevent the escape of the liquid with which it is filled, except through the pipe, is commonly used; an improvement upon this is the Indian-rubber bag, with a neatly turned pipe of ivory or brass, to which is sometimes added a shield and stop-cock. At page 49 of this volume is shewn a cut of a simple and cheap form of injecting apparatus; it is formed chiefly of vulcanized Indian-rubber, and is capable of self-application.

INNERVATION (Latin *in*, and *nevus*, a nerve). The properties or functions of the nervous system, or, as it has been otherwise expressed, "the nervous influence necessary for the maintenance of life and the functions of the various organs." Very commonly the word has two very opposite meanings, viz., a state of weakness, and the act of strengthening (see *Nerves*).

INNOMINATUS (Latin *in*, not, and *nomen*, name). Nameless; hence we have, 1, *Innominata arteria*, the branch given off to the right by the arch of the aorta, which subsequently divides into the carotid and sub-clavian arteries; 2, *I. nervi*, a former name for the fifth pair of nerves; 3, *I. os*, or, as it is often put, *Os innominata*, a bone composed of three distinct portions, viz., the *Ilium*, or Haunch-bone; the *Ischium*, or Hip-bone; and the *Os pubis*, or Share-bone.

INOCULATION (Latin *in*, and *oculus*, an eye). The insertion, intentional or accidental, of a healthy or morbid virus, as the vaccine or syphilitic, into the system. We most commonly apply this term to the in-

troductio*n* of vaccine virus, inducing Cow-pox, as a protection against Small-pox (both of which diseases see, also *Vaccination*).

INOSULATION (Latin *in*, and *osculum*, a little mouth). The union of vessels, generally considered synonymous with *Anastomosis*; which term, however, properly signifies union by minute ramifications, the former term meaning a direct communication by trunks. See *Arteries*, *Veins*.

INQUEST (Latin to seek into, from *quæro*, to question). In English law, this is an inquiry by a jury of twelve persons, empanelled by the sheriff for the purpose of hearing evidence, and trying or ascertaining any fact in a civil or criminal cause; it is one of the greatest safeguards of human life in this country, and is, or should be, always resorted to in cases of sudden and unexpected death. As a check to secret poisoning, or murderous violence of every kind, we should value this peculiar institution of our native land very highly, and afford every possible facility for its being fully and efficiently carried out: to this end, those who are first at the discovery of a person found dead, or the scene of a murder, or at the deathbed of a person who expires without there being apparently any good and sufficient natural cause, should note carefully every circumstance, and be prepared to give evidence in a clear and distinct manner. It is a somewhat anomalous condition of things that the coroner, who is the presiding judge on an Inquest, should be generally a man of law, and not of medicine. There are so many medical points involved in all inquiries of the kind, that surgeons, one would think, would be the fittest persons to conduct them.

INSANITY (Latin *in*, and *sanus* sound). Deranged intellect or madness. Some writers on this dreadful malady have classified it under four distinct heads, viz.:—1, *Moral Insanity*, or unsoundness of mind, which consists in a morbid perversion of the feelings, inclinations, temper, and natural disposition, without any remarkable intellectual disorder or confusion of the reasoning faculties. The patient, in this case, may be quite free from any insane delusion or hallucination. 2, *Intellectual Insanity*, which may be general, or only partial, in the latter case we call it *Monomania*; in the first instance we have confusion of the intellect on every subject; in the last, it may be quite clear on all subjects save one. 3, *Mania*, Raving Madness; here we have the understanding completely darkened, or illuminated only by fitful gleams of light;

the patient talks absurdly on every subject, and commits all sorts of mischief to himself and others, for which he cannot be held accountable. 4, *Incoherence*, or Dementia, sometimes called Infatuation. The characteristics of this form of mania are perpetual restlessness, diminished sensibility to external impressions, and complete forgetfulness of all moral restraints, so that repeated acts of extravagance are committed, unconnected ideas and emotions flow through the mind in rapid succession, or with intervals between them which appear like perfect blanks.

The chief fact which we cannot help observing in all cases of Insanity is, the existence of a strong mental delusion—the belief in something which has no real existence, on which belief the patient acts. Some of these delusions which possess the minds of the Insane are in themselves harmless, and do not interfere with the performance of the social duties of life, therefore it is not necessary to place the person possessed by them under restraint.

Although Insanity is purely a mental disease, yet it often proceeds from physical causes; some derangement of the animal functions acting upon the nervous system, of which the brain is the chief seat and centre. In most cases where it comes on, there is some preceding disorder by which the general health is materially affected; there is, probably, failure of appetite, restless nights, constipated bowels, and an excited and irritable state of the mind; fretfulness, peevishness, and, perhaps at times, little whimsicalities and eccentricities of conduct, with great fluctuation of spirits. These symptoms will sometimes remit for a time, and the patient regain his usual health and spirits; but oftener they become gradually more and more marked and perceptible, until there is no longer any doubt of the nature of the malady, which may become confirmed in one or other of the forms above indicated.

Sometimes Insanity comes on quite suddenly, without any warning whatever, and this is most usually the case where it is caused by strong mental emotion, such as love, joy, grief, fear, &c., acting upon a weak brain; or where there is hereditary predisposition—a not uncommon cause of the overthrow of reason. Bad living and impure air, like that common to the poorer class of dwellers in crowded cities, has a tendency to produce it; we have heard it stated that the eminent psychologist, Dr. Conolly has declared, as the result of his enquiries, that the fact which stands most

prominently out, is the certain tendency of bad and insufficient food in the parents to produce Insanity or Imbecility in the offspring: this is a fearful fact to contemplate, when we know how large a proportion of our poorer population are ill and underfed. How shall we check the increase of Insanity? is a question which has much engaged the attention of the learned and the benevolent. Education will not do it, for the educated mind becomes insane sooner, perhaps, than the uneducated; in uncivilized nations mad persons are very rare indeed. The crosses and disappointments of a life of trial and struggle are fruitful causes of Insanity, yet men who are at ease on their possessions do not always escape it. In the mad race after wealth, we see both winners and losers become themselves mad. Even religion will sometimes throw the mind off its balance; but that we are inclined to believe is commonly a spurious sort of piety which leads to lunacy. Nothing is so likely to keep the mind staid and settled, amid the storms and tempests of life, as a firm trust in a superintending Providence, and an assurance that let what will happen here, hereafter will come a fulfilment of the blessed promise of peace and eternal rest for the weary and heavy-laden. One means of checking Insanity, then, must undoubtedly be the spread of pure and undefiled religion; another, the improvement of the physical condition of the poor, and also their intellectual improvement; for although it may be true that education does not directly lessen the liability to Insanity, yet it does so in an indirect manner, by infusing among them higher tastes, and weaning them from habits of intemperance, and sensual indulgences which weaken the body, and render the mind an easy prey to insane fancies and delusions. Among the means of lessening this fearful malady, too, we must reckon the prevention of the marriage of individuals predisposed to it, by inheritance or otherwise. Such should feel, that to avoid propagating their species is a duty which they owe to society.

With regard to the *treatment* of Insanity, this naturally resolves itself into two divisions, the medical and the moral, and the first may be very briefly disposed of. When the malady proceeds from physical causes, such as organic disease or functional derangement, we have simply to ascertain from whence the mischief proceeds and act accordingly; the only general rules that can be laid down are that the increased vascular excitement and inflammatory action, which is common in the first

stages of mania, must be reduced by depletion, low diet, the usual aperients, and, if need be, refrigerant applications. When there is nervous debility and prostration of strength, a strengthening diet is required, but stimulants, as a rule, should be avoided; opiates, to soothe the brain, may be useful; fresh air, cleanliness, and exercise, is sure to be in all cases.

In the moral treatment of the Insane, a great and happy change has taken place within these few years, and with the most beneficial results; chains and corporeal punishments are now altogether discarded; and straight waistcoats nearly so. The patient, it is true, is secluded from society for his own safety and that of others, but this removes him from the influence of those circumstances which produced the disorder. Occupation and amusement for the mind are now provided for him, and, if there is a spark of reason left, it has every chance of being fanned once more into a flame; he is treated with kindness and confidence, and gently, though firmly restrained, when restraint is necessary. If he makes any progress towards convalescence, he is separated from those who are hopelessly Insane, so as not to be dragged back again into the abyss of madness from whence he is making efforts to escape. We have now a classification of the inhabitants of lunatic asylums, and every thing is done which science and benevolence can suggest, to render their inmates comfortable and contented, and to restore to society such of them as are recoverable. The chance of recovery depends greatly on the complication, or otherwise, of Insanity with other diseases; also on the form which it assumes, the period of its duration; the age and sex, and constitution of the patient. The mean duration of cases which terminate favourably appears to be from five to ten months; after the latter period there is little or no hope of recovery. The most favourable age is shown by statistics to be between the 20th and 30th years. In advanced life Insanity is generally permanent, and with the young it usually depends on some affection of the brain which causes an early death. It is a curious fact that Insane women are more easily cured than men; we have not seen it so stated, but should imagine that the female sex, on account of their greater excitability of temperament, are most frequently visited by the malady; and this also, too on account of uterine affections and irregularities, which may be numbered among the exciting causes of Insanity (see *Madness*).

INSERTION (Latin *insero*, to implant).

The attachment of a muscle to the part it moves. Compare *Origin*.

INSOLATIO (Latin *in* and *sol*, the sun). A term sometimes made use of to denote that exposure to the sun which is made in order to promote the chemical action of one substance upon another. The term has also been applied to the influence of the sun's rays upon the head, commonly called a Sun Stroke. See *Coup de Soleil*.

INSOLUBILITY (Latin *in* and *solvo*, to loose). A property resulting from cohesion or holding together of the particles of any matter, so that the substance resists solution, or passing into a fluid state.

INSPIRATION (Latin *inspiro*, to inhale). That act of respiration, or breathing, by which the air is drawn in or inhaled; compare *Expiration*. See *Air*, *Breath* and *Breathing*, *Lungs*, &c.

INSTINCT (Latin *instinctus*, inwardly moved). This is a natural impulse to certain actions which animals perform without thought or deliberation, and without knowing *why* they do it. It would not fall within our province to discuss here the much disputed question of Reason and Instinct, we have only to notice the operations of the latter faculty as far as it regards the physiology of health and disease in the human body, and with this object in view, we notice first the

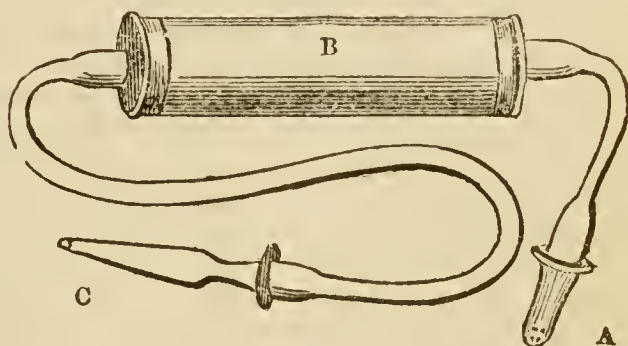
Instinctive Motions. Those involuntary actions which are excited mediately through the nerves, being part of the reflex functions of these organs. The principal of these motions are—The closure of the eyelids and the glottis; the act of sucking, swallowing, and closing the hand to grip or hold anything; the action of the sphincter and other muscles; inspiration, as an involuntary act; sneezing, vomiting, &c. All these are purely instinctive motions, and take place in the unconscious child as well in the reasoning adult, on the application of the appropriate stimuli.

It is the opinion of some medical authorities, that the desire for particular and out-of-the-way kinds of food, which is sometimes expressed by invalids, and those recovering from fevers and other sicknesses, should be gratified, as they consider it instinctive; this agrees with the popular notion, that what a sick person fancies will never hurt him; a dictum, however, which must be received with reservations.

INSTRUMENTS. It is, no doubt, a question which sometimes arises in the minds of those who are preparing for family cares and duties—What kind of surgical instruments am I likely to require?—and especially would this be a matter of grave

consideration with one who was about to emigrate, to a partly-unsettled country, where such articles of utility could not be procured when wanted. We therefore think it advisable to give a list of those which are most available for the means and operations for the relief of pain and sickness, which every one might be called upon to use:—A pair of Lancets, in a case, and a Gum Scarificator, like that represented at page 39; also a Vaccinating Lancet, or a Weir's Vaccinator; two pairs of Scissors, one with sharp and one with blunt points; a silver Caustic Case; a 2-ounce Syringe, and an Enema apparatus, or, better still, two of these; one on Read's principle, in a case, with long pipe, which might be used as a stomach-pump, and one with compressible elastic bag.

The form of Enema here given will be found most convenient: A is for insertion in the fluid; B the barrel which is grasped



by the hand, and into which the fluid rushes when the pressure is withdrawn, and from which it passes, when pressure is again applied, through tube and pipe C, into the anus.

A pair of plain, and one of spring Forceps, for securing a divided artery; also Tooth Forceps. Then it is desirable, especially for emigrants, to have a Tentaculum, a Tourniquet, a shut-up Bistoury, or knife; some curved needles, like those used by surgeons, with some silk to use with them; five or six elastic gum Bougies, of different sizes; and a silver Probe. Of course as much practical information with regard to the use of these as possible should be obtained; for it matters little how perfect the instrument may be, if there is no skill in the hand that guides it. (See *Medicine Chest*).

INSULATION (Latin *insulus*, an island). A term applied to a body containing electrical fluid, and surrounded by nonconductors, so that its communication with other electrical bodies is cut off. See *Electricity*.

INTEGRAL PARTICLES (Latin *integer*, entire). The most minute particles into which matter can be divided without resolution.

into its constituent elements. Thus, powder marble as fine as you may, all the minute grains will be of like property and composition; but if a chemical change is effected, so that the calcium, the carbon, and the oxygen, of the marble are separated, we then have the elementary or constituent particles.

INTEGUMENTS (Latin *in*, and *tego*, to cover). The coverings of any part of the body, as the cuticle, &c. The common integuments are the skin, with the fat and cellular membrane adhering to it; also particular membranes which invest certain parts, as the tunics or coats of the eye. See *Skin*, &c.

INTERLUNUS MORBUS (Latin *inter*, between, and *luna*, the moon). An old name for *Epilepsy*, which was so called because persons born during the wane of the moon were supposed to be particularly liable to that disease.

INTERMITTENT (Latin *inter*, between, and *mitto*, to send). Occurring at intervals; generally applied to a class of *Fevers*, (which see). From the same Latin root, *inter*, come the terms, 1st—*Inter-articular*, a designation of the cartilages which lie within the joints, as that of the *Jaw*, (see *Skull*); those between the lower extremity of the radius and ulna; those between the condyles of the femur, and superior extremity of the tibia. The term is also sometimes applied to ligaments, as the *ligamentum teres*, within the *acetabulum*, &c., &c. *Inter-auricular*, a term applied to the septum, between the auricles of the heart, in the fœtus. *Inter-clavicular*, the name of the ligament connecting the one clavicle with the other. *Inter-costales*, between the ribs; applied to two sorts of muscles, the external and the internal, which have been compared, from their passing in opposite directions, to St. Andrew's cross; the term is also applied to arteries, &c. *Inter-current*, distinctive of fevers which occur sporadically, that is, from occasional causes, such as cold, fatigue, &c., in the midst of an epidemic. *Inter-ossei*, muscles situated between bones; such as the *Inter-manus*, between the metacarpal bones, and *Inter-pedis*, between the metatarsal bones. (See *Foot*, *Hand*). We also apply the term to branches of the ulnar artery, and to ligaments. *Inter-spinales cervicis*, the designation of six small muscles situated between the spinous processes of the neck; to these processes there are also attached *inter-spinous ligaments*. *Interstitia*, that which stands between, a term applied to an organ occupying the interstices of contiguous cells, as the uterus, the bladder, &c. *Inter-transversales*, the name

given to certain muscles, such as those situated between the transverse processes of the vertebræ of the neck, called *colli*, and those between the transverse processes of the lumbar vertebræ, known as *lumborum*. *Inter-vertebral*, a term applied to the fibro-cartilage between the vertebræ, and to ligaments, &c. The abrasion, fret, or chafing of the skin of parts that come in contact, as in the groins, behind the ears, &c., is called *Inter-trigo*.

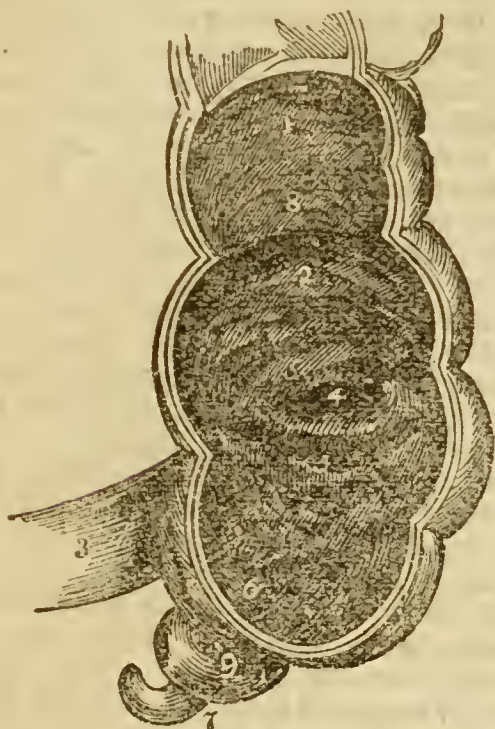
INTERNUNTII DIES (Latin *inter*, and *nuntius*, a messenger). Critical days in a disease, or such as occur between its increase and decrease. See *Crisis*.

INTESTINA. Is the name given to an order of Worms which inhabit the bodies of other animals; of those which affect man, the most familiar example is the Tape Worm, for a cut of which see vol. 1, p. 311; see also article *Worms*.

INTESTINES (Latin *intus*, within). That part of the alimentary canal which extends from the stomach to the anus, and is formed of a peritoneal, muscular, and mucous or viscous coat, united by cellular membrane; it is divided into Small and Large Intestines; the first of which has three divisions, severally distinguished as the *Duodenum*, or twelve inch Intestine, the membrane of whose inner surface presents a number of folds called *valvule conniventes*; this begins at the pylorus or lower surface of the stomach, it bends first backwards, then downwards, and then across the body, being partially covered by the peritoneum: it then takes the name of *Jejunum*, so called from its being usually empty at this part; it then runs into the remaining portion called the *Ileum*, which takes its name from its mazy folds or convolutions. The Small Intestines open by the *ileo-colic valve* into the Large Intestines, which have also three divisions, 1st, the *Cæcum*, or head of the *colon*, to which is attached the *appendix vermiformis*, a little blind bag: the *Colon*, which constitutes almost the entire length of the Large Intestine, is termed as it ascends into the right lumbar region, the *ascending colon*, as it crosses the abdomen, the *transverse arch of the colon*, and as it descends in the left lumbar region, the *descending colon*; in the iliac region it forms a double curve like the Greek letter χ , and is thence called the *sigmoid flexure of the colon*; the fold of the peritoneum which inverts it, being termed the *iliac meso-colon*.

The termination of the Large Intestine is the Rectum, or end of the alimentary canal, so called because it is nearly in a right line;

here the covering called the peritoneum ceases, and the Intestine accommodates itself to the hollow of the pelvis, having its external opening in the anus, the sphincter of which, a strong circular muscle, guards it. The following cut from Wilson will serve



to render more plain what we have attempted to describe. It represents the Cæcum with its appendix, entrance of the Ileum, and Ileo-cæcal valve. No. 1, Cæcum; 2. Commencement of Colon; 3. Ileum; 4. Aperture of entrance of the Ileum into the large Intestine; 5 5. Ileo-cæcal Valve; 6. Aperture of Appendix vermiformis cæci; 7. Appendix; 8 8. Sacculi of the Colon, separated by valvular septa; 9. Falciform frænum of the appendix.

The whole of the *Intestinal Canal* is a continuous tube about six times the length of the body, the first three-quarters of it comprising the Small, and the last quarter the Large Intestines; the size of the tube of the latter portion is much greater than that of the former; the Cæcum, the largest of all, being, at least, three times the size of the Ileum as the above cut shews. (See *Abdomen*, *Alimentary Canal*), and heads of the various divisions above-named.

INTOLERANCE (Latin *in*, and *tolero* to bear). A term applied to that condition of the system in which a remedy cannot be borne, such, for instance, as loss of blood. Compare *Tolerance*.

INTOXICATION. (Latin *in*, and *toxicum*, poison); this latter term being from the Greek *toxos*, a bow or arrow; its application to poison seems to have arisen from

the circumstance that barbarous people have been accustomed, as they still are, to poison their arrows. With us, to intoxicate is to inebriate, or excite the spirits to a kind of delirium with alcoholic liquors. A person in this state is, to all intents and purposes, poisoned, and it is only a question of the quantity taken, or the power which his system possesses of resisting the influence of the deleterious matter forced into it, as to whether he shall die or recover. The great curse of our land is intemperance, leading to Intoxication. Some persons are so often in this state, that they can hardly ever be said to be quite out of it; the poison is renewed as often as its most violent effects cease, and the wonder is how the wretched drunkard drags on a miserable existence so long, as he often does—a curse and a reproach to himself, his friends, and to human nature generally.

Some indication of the extent of danger to life, which exists in an intensely intoxicated person, may be learned by the non-contractibility of the iris. If this shows no sensibility to light, or to any sudden motion made near it, there is little hope of recovery. The stomach-pump should be used to get rid of as much alcohol as possible, and sickness excited by Mustard, or any emetic, except Antimony, which is too depressing. Vinegar and Water, Hartshorn, or Sal Volatile may be freely given; Cold Water poured on the head in a shower, a Turpentine injection thrown up, and Mustard plasters applied to the pit of the stomach and down the course of the spine. See *Delirium Tremens*.

INTUS-SUSCEPTIO (Latin *intus*, within, and *suscipio* to receive). By this term we understand the descent of a higher portion of intestine into a lower one, generally of the ileum into the colon. When it takes place downward it is called *progressive*, when upwards *retrograde*.

INULIN. A starch-like powder, deposited from a decoction of the root of the *Inula Helenium*, commonly called *Elecampane* (which see).

INVERMINATION (Latin *in*, and *vermis*, a worm). An affection in which worms, or the larvæ of insects, inhabit the stomach or intestines; it is sometimes called *Helminthia*. See *Helmins*, *Worms*.

INVERSICUTERI (Latin *inverto*, to invert). That state of the womb in which it is wholly or partially turned inside out. See *Uterus*.

INVOLUCRUM (Latin *involvere*, to wrap in). More commonly used as a botanical term, signifying the strong external layer of the covering of plants; but also employed in

surgery to designate the membranes which cover any part. See *Membranes*.

IODINE (Greek *iodes*, or *ioiodes*, violet-coloured). This is a crystallised solid substance, found principally in sea-water, and in plants, and other marine productions; it becomes volatile at a slight increase of temperature, and diffuses itself in the form of a beautiful violet vapour, hence the above name. This is one of the most valuable of therapeutic agents, and is largely employed in its various forms and combinations. We now chiefly obtain this substance from the ashes of the kelp, or sea-weed, which is burnt for the purpose of obtaining alkali; the ashes are heated with sulphuric acid and peroxide of manganese, and the vapour which arises is received in a cold vessel, where it condenses on the sides, and forms the soft, opaque crystals, of a blackish blue colour, and metallic lustre, which constitute the Iodine of commerce. It has a disagreeable suffocating odour, and nauseous taste, and it stains whatever it touches of a rusty yellow colour, which remains on the skin for a considerable period. It dissolves readily in alcohol, but very little in water; its characteristic property is that of giving an intense blue colour to starch, of the presence of which it is, therefore, a sure test. United with metals it forms *Iodides*, and with hydrogen and oxygen, Acids, like bromine and chlorine; in many of its properties it bears a close resemblance to the latter.

Iodine, although only obtained in a pure state of late years, has long been employed as the efficient principle of several therapeutic agents, such as Burnt Sponge, and certain mineral waters. Its specific action has been only ascertained, with precision, since it has been procured as a distinct principle. Owing to its sparing solubility in water, it is seldom now, however, administered in a pure state, but rather in the form of some artificial compound, such as the Iodide of Potassium, its most common vehicle of administration. The diseases in which it has been found most useful are glandular swellings, especially bronchocele or goitre, which rarely resists its continuous action. In chronic rheumatism, and some forms of strumous disease, it is also efficacious. It has been given, too, in cases of poisoning with bruchia, strychnia, and veratria, not, however, with such decided success as to warrant our calling it a certain antidote to these formidable poisons. As an outward application, Iodine has been of late most extensively employed. In bronchitis and chronic enlargements of the abdominal viscera, especially of the liver, it has proved

eminently successful; in the latter case it is advantageously combined with Mercury. It may be applied in the form of tincture, painted over with a camel-hair brush, to enlarged tonsils, and to chronic swellings of the joints, as well as to glandular swellings. It is an excellent emmenagogue, combined with Iron, and with Mercury is valuable in syphilitic diseases. Iodine injections are commonly used after tapping for hydrocele; and they have also been employed successfully in effusion of the pleura. As a means of dispersing organic exudations, lotions of Iodine are much to be preferred to ointments; they should be applied on compresses of lint, saturated with them, and bound over the parts. The following may be recommended as a good form for this purpose:—take Iodine, 10 grains; Iodide of Potassium, 1 drachm; Distilled Water, 1 pint. For painting over a glandular or other swelling, the Compound Tincture of the Pharmacopœia may be used; if not strong enough, add Iodide of Potassium, $\frac{1}{2}$ a drachm; Iodine, 10 grains to 1 ounce of the Tincture. It has been found that this substance will dissolve more readily in Water, to which Syrup of Orange has been added, than in Plain Water, and more readily still in that which has Tannin in it. Two grains of this latter will, it is said, affect the solution of 10 grains of Iodine in 6 ounces of Water, a quantity sufficient for most therapeutic purposes; the dose being from 1 to 2 grains; so that about a tablespoonful of this mixture might be taken two or three times a day. The action of Iodine and its compounds should be carefully watched, as a long train of alarming symptoms will sometimes follow its continued use; among these may be named vertigo, nausea, extreme depression, and syncope, sometimes ending in death. Its chief official preparations, besides its metallic compounds with Potassium, Iron, Lead, Mercury, and Arsenic, &c., are the Compound Liquor of Potash with Iodine: dose, 1 to 4 drachms; Syrup of Iron with Iodine, dose, $\frac{1}{2}$ a drachm to 1 drachm, an excellent tonic for scrofulous children: Compound Tincture of Iodine, dose, 10 to 30 minims; Compound Iodine Ointment; and the Ointment of Iodide of Potassium.

In a French provincial paper, we find it stated that a blacksmith, who had been suffering from an impaction of a metallic particle in the cornea for a week, was relieved by the following collyrium, after every attempt at extracting the splinter had failed:—Iodine, 1 grain; Iodide of Potassium, 10 grains; Rose-water, 3 ounces. As soon as this solution was applied to the

eye, oxidation of the metallic particle took place, and its brilliancy disappeared; the distressing symptoms about the eye abated, sight was restored, and nothing but a microscopic fragment of metal left in the cornea. A soluble Iodide of Iron had been formed.

Dr. Barlow, of Guy's Hospital, has long employed the Iodide of Zinc in the treatment of chorea when complicated with struma—a remedy which he introduced into use. In cases, in which there is no peculiarity of diathesis, he employs the Sulphate, but in those in which any indications of struma exist he prefers the Iodide. Besides its influence over the scrofulous cachexia, it is quite possible that the iodic element may be useful against the rheumatic diathesis to which the choreic is so close a congener. Good authorities are not wanting who would account for the frequency of heart complications with chorea, by supposing that the latter is a condition very closely connected with rheumatism, depending upon similar causes, and occurring more frequently in those liable to it than in others.

We ought not to close our account of this valuable therapeutic agent, without alluding to Davenport's Syrup of the Iodide of Quinine and Iron, and of the Iodide of Potassium and Iron; these are excellent preparations, possessing all the strengthening and anti-scrofulous properties of their triple components, and being very palatable, are quite adapted for family use.

IONTHOS (Greek for the root of the hair). The name by which some ancient medical writers designate the disease *Acne* (which see), because it often occurs during the growth of the *lanugo* or first beard.

IOTACISMAS (from the Greek letter *iota*). A defective pronunciation of the letters *j* and *g*. See *Psellismus*, *Stammering*.

IPECACUANHA (*ipi*, Peruvian for root, and *Cucuanha* the district from whence it was first procured). This is a plant formerly supposed by Ray to be a species of *Paris*; by Linnæus a kind of *Lonicera* or honeysuckle; generally thought to be a violet, or species of *Callicocca*, but now decided, on the authority of Decandolle, to be the *Cephaelis Ipecacuanha*, a Brazilian plant of the natural order *Cinchonaceæ*. Its varieties, as known in commerce, are:—1st, the Brown, which is the best, containing about 16 per cent. of *emetin*, which is the active principle; 2nd, the Grey, or Ash-coloured, which contains 14 per cent.; and 3rd, the White, containing only five per cent. of *emetin*. Some writers, Dr. Thomson among them, prefer to distinguish it as 1st, Annulated, or

Ringed; and 2nd, Striated, or Streaky, but it may generally be described as in the New London Pharmacopœia—"Ashy-coloured, tortuous, very much cracked, and marked in rings, by deep fissures, having an acrid, aromatic, bitterish taste." The following cut will serve to show the common appearance of the plant while growing.



This is one of the most valuable of medicinal plants; taken in small doses, it is expectorant and diaphoretic, having a specific action on the bronchial mucous membrane, so as to excite its secretion when too dry; it relieves the system, and causes sweating. In full doses, of about 20 grains, it is the safest and easiest emetic known; it does not nauseate, and reduce the system so much as Tartar Emetic, nor is it so rapid and irritating in its action as Sulphate of Zinc, which, however, is to be preferred in cases of narcotic poisoning, as promptitude of action is there of the utmost consequence, and irritation of the system is rather beneficial than otherwise. For children and delicate persons, Ipecacuanha should always be preferred, where it is necessary to excite nausea or vomiting; its expectorant property renders it especially serviceable in catarrhal affections, in which it is frequently given in combination with Squills; in febrile affections, we often employ it as a diaphoretic, combined with Opium, as in the *Dover's Powder* (which see). In hooping cough and asthma it is given to relieve spasmodic constriction, and clear the passages of phlegm by vomiting; and in dyspepsia and dysentery it is also found beneficial. Of the Powdered Root, the dose, as an expectorant, is 1 or 2 grains; as a diaphoretic, 2 to 4 grains; as an emetic, 10 to 20 grains, according to the age and strength of the patient; for the latter purpose, it should be

given in plenty of warm water, and as much as possible of this should be drank after it. (See *Emetic*.)

Among the officinal formulæ of this plant are the Decoction; Extract; Lozenges, each containing $\frac{1}{2}$ a grain; Powders, Simple and Compound; Pills, combined with Opium and Squills; Syrup; and Wine; the last is the most generally used; it may be made for domestic purposes by digesting for seven days 1 ounce of the bruised root in a pint of Sherry Wine: dose, as expectorant and diaphoretic, 10 to 30 minims; as emetic, 2 to 4 drachms, or for children, 20 minims, to a drachm. By boiling down 1 ounce of this with the same quantity of water, and 2 ounces of sugar, a syrup may be made for infants, of which from $\frac{1}{2}$ a drachm to a drachm will be sufficient to produce vomiting. (For pills and other formula, see *Cough*).

As the result of chemical analysis we find Ipecacuanha to consist of its alkaline base, *emetin*, 16 parts; oil and wax, 8; gum, 10; starch, 40, and woody fibre, 20; of the *emetin*, a single grain is a certain and useful vomit, but it is too powerful a drug for domestic use.

IRIS FLORENTINA or GERMANICA. The Florentine Iris, commonly known as Flower de Luce, belonging to the natural order



Iridaceæ. (See *Orris Root*). The Yellow Water-Flag, *Iris Pseudo-acorus*, formerly termed in the London Pharmacopœia, *Gla-*

diolus luteus, is employed by the peasants in the south of Scotland to cause sneezing; and it has been said that the roasted seeds very nearly approach coffee in quality; it scarcely, however, merits a place among our medicinal plants.

IRIS (a rainbow). The colouring ring which surrounds the pupil of the eye is commonly so called; properly, however, the term signifies only the anterior lamina of the ring, of which the posterior lamina is the *uvea*; from this root comes *Iritis*, inflammation of the Iris. (See *Eye*). The term *Iris* is also applied to the Rainbow Ringworm, a species of Herpes occurring in small circular patches, each composed of concentric rings of different colours. See *Ringworm*.

IRON (Latin *ferrum*). This metal is used medicinally in a variety of forms, the chief value of which consists in their tonic properties, rendering them very useful in debilitated states of the system; weak, pallid, and delicate persons may generally take these preparations with safety and advantage; but those who are habitually costive, who suffer from piles, or from a determination of blood to the head, should carefully avoid them; their usual effect being to increase the arterial action, and promote the secretions, therefore to an excited state of the circulation they are unsuitable. As a rule, no person with a naturally florid complexion, or a full habit of body, should take Iron, which is most commonly prescribed for chlorotic anæmia, scrofula, enlargements of the liver and spleen, fluor albus, gleet, passive hæmorrhages, chorea, atonic dyspepsia, chronic dysentery and diarrhœa, tic-doloureux, and other nervous affections, and worms. The administration of Iron should generally be preceded by that of purgatives, and if headache or constipation follow its use, it should be discontinued.

The preparations of this metal are so numerous, and some of them so little used and unsuitable for domestic employment, that we need only particularise a few of them—such as are most available for this purpose; we may observe at the outset that they are all oxides and salts, and that they are often spoken of as preparations of Steel or *Chalybeates* (which see).

The medicinal springs of this country in which Iron is found most largely, and which are, therefore, called Chalybeate Waters are those of Dumblane, in Scotland; Harrogate; Hartfell, near Moffatt; Holywell, in Lancashire; Isle of Wight; and Tunbridge Wells, in Kent. When the

constitution requires Iron, this is, perhaps, the most beneficial way of taking it; but this is not always attainable. The striking benefit, which follows the use of the metal in these waters, justifies the belief that it acts most beneficially in small doses diffused through a considerable quantity of liquid. Many persons drink Chalybeate Waters merely because it is fashionable to do so, or that they happen to be near them; but, unless they really require the action of the tonic, they are likely to do themselves injury; they had better therefore be guided by medical advice.

Iron in the crude state, in the form of filings, was formerly much used as a tonic stimulant, emmenagogue, and anthelmintic: they were given in doses of from 5 to 30 grains, combined with aromatics, bitter extracts, Myrrh, or Soap; or made into an Electuary with Treacle or Honey; but they are now almost superseded by the various ferruginous preparations, the chief of which we proceed to notice.

Iron or Steel Wine is one of the most simple and useful of these preparations; it is especially adapted for children: the dose is from 1 drachm to $\frac{1}{2}$ an ounce.

Ammonia-tartrate of Iron is a good preparation, without astringency or disagreeable taste; it is especially serviceable in uterine diseases: the dose is from 5 to 8 grains; the best vehicle is Honey.

Ammonia-citrate of Iron is an elegant and agreeable preparation, applicable to the same class of diseases as the last, and also to general debility; it may be given in Cinnamon or other aromatic waters, but not in bitter infusions, as it turns most of them black; the dose of this is from 5 to 8 grains. It is kept in combination with Quinine, and may be beneficially exhibited when a bitter tonic is required.

Carbonate, or Sesqui-oxide of Iron is a red, insoluble powder, disagreeable to take on account of its bulk; as much as a drachm or 2 drachms of it being required, three or four times a day; it should be made into an electuary with Confection, Honey, or Treacle: it is a good chalybeate tonic, and has a high reputation for the cure of neuralgic affections, especially tic-doloureux; it must be taken for a considerable time to do much good.

Iodide of Iron is an excellent tonic in scrofulous debility and deficient menstruation, strumous swellings, incipient cancer, diseased mesenteric glands, and scrofula generally: the dose is from 2 to 5 grains, but it is difficult to keep either in a solid form or solution, as it very soon decomposes; it may

be obtained in the form of *Syrup*, and may be kept good in a well stopped bottle for a considerable time, especially if a piece of iron wire is kept in it; the dose of this is from 15 minims to a drachm.

Muriated Tincture of Iron, commonly called Tincture of Steel, is a good astringent and tonic, and acts specifically upon the urinary organs; it is therefore useful in irritation of the bladder and retention of urine, depending on spasmodic stricture of the urethra; in vomiting and spitting of blood it is also serviceable: the dose is about 10 minims; and for stricture it may be given every 10 or 15 minutes, to the extent of 6 or 8 doses, but it should not be carried beyond this. This is also an excellent local styptic, and may be applied with advantage to loose fungous sores, and as an astringent to relaxations of the throat, with a camel's hair brush.

Sulphate of Iron, sometimes called Green Vitriol, but more commonly Copperas, is poisonous in large doses, but in small, that is, from a grain to 5 grains; is a good emmenagogue and also anthelmintic; its astringent properties render it useful in profuse hæmorrhages, in chronic diarrhoea, and dysentery. It enters into the composition of the compound Steel Pill, and the Compound Steel Mixture of the Pharmacopœia, being combined in both cases with Myrrh and an alkali: when properly and freshly made, in which case it will be of a decided green colour, the latter is one of the best emmenagogues that can be administered: the dose is about 2 table-spoonsful two or three times a day.

The *Tartrate*, or *Potassio-tartrate of Iron*, has similar properties with the Ammonia-tartrate, and may be applied to the same purposes. One objection to the continued taking of most preparations of Iron, and especially the Muriated Tincture, and the Sulphate, is that it is likely to discolour the teeth; while taking it, persons should be careful to keep them well cleaned, and to use an alkaline tooth powder.

IRRITABILITY (Latin *irrito*, to provoke). The action produced by any stimulus. This term, as signifying a disease, we apply to cases arising from calculus in the ureter, or gall duct; and those induced by the presence of improper food in the stomach, or morbid matters retained in the bowels, giving rise to inflammatory action. When we speak of *Irritability*, we allude to the action of certain muscles, as those of the heart, the intestines, &c., which action is caused by a stimulus acting immediately upon their fibres, and as a consequence exciting the

nerves in connection with them, and of course, though in a less degree, the whole nervous system. Various names have been given to this property; thus Haller termed it *Vis insilu*; Goerter *Vis vitalis*; Boerhave, *oscillation*; Stahl, *tonic power*; Bell, *muscular power*; Cullen, *inherent power*; and Bostock, *contractibility*; but it cannot, perhaps, have a better definition than that of Abernethy, who called it *excited debility*; it being an unnatural stimulation of the excited organs to work above their common capability. Again it may be termed diseased excitement; not amounting to inflammation, but commonly leading thereto.

Irritability is symptomatic of many diseases, and it is extremely trying to both patient and medical adviser, the latter of whom is often baffled by the contradictory symptoms which it causes. Great allowance must be made for persons suffering from this cause of unnatural excitement of the muscles and nerves; they have frequently no more control over themselves than idiots, laughing and crying in a breath, and acting in the strangest way imaginable, although perfectly conscious that it is all very ridiculous. With such, too, the slightest words or looks of those about them assume an exaggerated importance, and aught which jars upon their delicate sensibility, or the smallest physical injury, will produce unbearable anguish of mind or body. They should be pitied and soothed—not, as they too often are, treated harshly and unkindly. Many of the diseases of children partake more of the character of irritation than inflammation, and irritable children are commonly looked upon as great nuisances, when in reality they ought to be regarded as great sufferers. Difficult dentition or digestion, worms in the intestinal canal, or almost any functional derangement, will produce convulsions, spasms, and other affections consequent on irritation, the action in most cases being first felt by the brain, and thence reflected, so as to affect a particular set of muscles, or the whole muscular system.

Under this head, we should make some remarks upon *Counter Irritation*, that is, some irritating agent applied to one portion of the body to produce increased action, and so draw off, or counteract, an analogous action going on in another portion. We generally apply the term to action artificially excited in the skin by stimulating liniments, friction, heat, blisters, cataplasms, or any other exciting agent. The extent to which this operation should be carried varies with the necessity of the

ease; it may be that merely reddening the surface will be sufficient, or it may be necessary to get up inflammatory action, so as to produce a discharge of purulent matter, as in *Blisters*, *Issues*, and *Setons* (which see); also *Cautery*, *Escharotics*, *Rubefacients*, &c. Some medicines which are given to promote the monthly discharge of the uterus, act as irritants, of these we have spoken under the head of *Emmenagogues*. Most poisonous substances owe their mischievous effects to their irritating powers; be they metallic or non-metallic, vegetable or animal, they mostly produce an inflamed state of the tissues with which they come in contact first, and then by absorption, or by nervous agency, spread through the whole system. See *Poisons*.

ISCHIUM (Greek *ischion*, the hip). The scientific name for the hip bone, a spinous process of the *os innominata*; hence we have the terms *Ischiatic*, the designation of a notch of the *os innominata*; of an artery which proceeds through that notch, &c.; and *Ischio cavernosus*, a muscle attached to the *Ischium*, and to the *corpus cavernosus*; it draws the root of the penis downwards and backwards. *Ischias* appears to have been the term used by the Latins for rheumatism of the hip-joint; it was afterwards corrupted into *ischiatrica*, and eventually to *Sciatica* (which see). *Ischi-agra*, *I. algar*, and *Ischiato-cele*, are also terms from the above root, the first signifying an attack in the hip, the second pain in the hip, and the third an internal rupture through the sciatic ligaments. See *Hip*.

ISCHNOPHONIA (Greek *ischnos*, slender, *phone*, voice). A shrillness of the voice, hesitation of speech, or stammering. See *Psellismus*.

ISCHURIA (Greek *ischo*, to retain, and *oyrin*, urine). A suppression of the secretion of the urine; the term is properly applied to *Ischuria renalis*, which is really a suppressed secretion; but it has been improperly extended to *Ischuria ureterica*, *vesicalis*, and *urethralis*, which are but *retentions*. See *Urine*.

ISINGLASS. Fish glue or *Gelatine* (which see), also *Icthyocolla*. It is chiefly prepared from the sounds and air bladders of the beluga and sturgeon; the substance is first scraped, then steeped in lime water to remove the grease, washed, dried, twisted into staples, bent into hooks, or rolled into balls, according to the quality; the finer sorts being cut into small shreds by machinery. Its chief use is to fine wine and beer, and to make jelly; 6 grains of it when good is sufficient to solidify half a pint of water. This is the

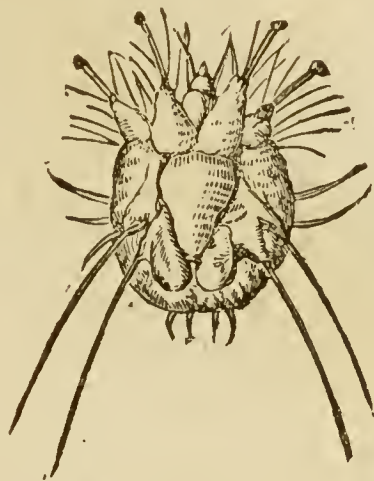
purest kind of animal gelatine, and its nutritious properties render it valuable for invalids and children; especially those brought up by hand, to whom it may be given before any kind of animal food, except milk, which it may be used to thicken.

ISSUE (in Latin *fonticulus*, a little fountain). An ulcer purposely made, and kept open for the cure or prevention of disease: this may be termed an artificial sore, from which a discharge of matter is kept up for the purpose of producing derivative action, and thus afford relief to some part of the system threatened or attacked. There are several ways of forming an Issue, such as applying caustics, or a red-hot iron to the part; but the most common, and perhaps the best plan for popular use, is that made by pinching up a fold of the skin, and making an incision with a lancet, or other sharp instrument, sufficiently large for the insertion of two or three peas, which are kept in by a strip of adhesive plaister. The irritation which they occasion will in a few days produce a discharge of matter; the peas should be taken out, and fresh ones inserted every day, while it is desirable to keep the Issue open. A blister, kept open by repeated renewals of the irritating matter, is an Issue; so is an application of Ointment of Tartarized Antimony, or any irritant sufficiently strong to produce a running sore. Caustic Potash is sometimes used for the purpose, thus:—Spread a piece of leather with Diacylon, cut a hole in the centre as large as the Issue is desired to be, warm, and stick it on to the seat of the intended Issue; then spread the Potash over the circular patch of skin left unprotected by the leather; it will soon change to a brown colour; then apply a Linseed Poultice, and renew it night and morning until the slough comes out, and leaves a small cavity, into which put two or three peas, previously prepared by being soaked in a Solution of Sulphate of Copper, in the proportion of about $\frac{1}{2}$ a drachm to an ounce, and dried; over the peas place a piece of Soap Plaister, and secure it tightly to the surrounding skin, and also by a bandage; the moisture will cause the peas to swell and press inwardly, and so irritate and inflame the wound, causing a formation of matter; they must be renewed daily, as in the cases before mentioned. In the management of all Issues, great cleanliness should be observed, and one should never be made if it can be avoided, on a part exposed to view, as it will most likely leave an indelible scar. See *Seton*.

ISTHMUS VIEUSSENI. The Isthmus of

Vieussens, a ridge surrounding the oval fossa, or remains of the *foramen ovale*, in the right auricle of the Heart (which see).

ITCH (scientifically called *Scabies*). A troublesome disease caused by a kind of acarus



known as the *Itch Insect*, or, as naturalists term it, *Acarus Scabiei*, of which we give a magnified representation.

In its natural size, it is so minute as to be scarcely visible to the naked eye. The most prominent symptom of this disease is a constant and intolerable itching; it never comes on of itself, but is always the result of contact with an affected person. It first shows itself in an eruption of small vesicles filled with a clear watery fluid, occurring principally on the hand and wrist, and in those parts most exposed to friction, such as the spaces between the fingers, and the flexures of the joints, &c; after a time it extends to the legs, arms, and trunk, but it rarely appears on the face. The insects are often found in the vesicles, but not always; hence some have doubted whether they are really the cause of the disease, although it is generally supposed that they are.

The Itch is never got rid of without medical treatment; but so that it will always yield, provided proper cleanliness be observed. Sulphur is the grand specific for it; it may be applied in the form of Ointment, prepared as follows:—Flowers of Sulphur, 2 ounces; Carbonate of Potash, 1 drachms; Lard, 4 ounces: to be rubbed well in wherever the eruption appears, every night and morning; washing it off with soap and flannel, before each fresh application. The most effectual plan is to anoint the whole body, from the nape of the neck to the soles of the feet, and out to the ends of the fingers; put on socks, drawers, flannel wrapper, and gloves, and so remain in bed for 36 hours, repeating the anointing operation twice during that time; then take

a warm bath, and wash the whole person with soap and flannel. In mild cases, a sulphureous vapour bath taken twice in 24 hours, with warm soap and water washing, will generally be sufficient. In obstinate ones, it may be necessary to resort to Alterative aperients, a spare diet, with ointment, warm baths, and a lotion made as follows:—Dissolve 4 ounces of Sulphate of Potash in a Quart of Water, and add $\frac{1}{2}$ -ounce of Sulphuric Acid; to be applied warm, with a sponge, before the fire. According to an announcement made to the French Academy of Medicine by M. Bonnet, Benzine rubbed on the affected parts will cure Itch in five minutes; the patient has only to take a warm bath after it, and lo! he is clean. In France, also, an Ointment composed of 2 scruples of Naphthaline to 1 ounce of Lard has been found an effectual remedy for this troublesome disease; but we hold that there is nothing like Sulphur. The Compound Sulphur Ointment of the Pharmacopœia, made with Sulphur, White Hellebore Powder, Nitrate of Potash, Soft Soap, and Lard, is no doubt a very effectual application, but it is disagreeable to use, and objectionable on account of the Hellebore. The Simple Sulphur Ointment, as above directed, probably answers the purpose equally well, and is free from this objection. (See *Psora*). *Bakers' Itch* is a species of *Psoriasis*, (which see). *Bricklayers' and Grocers' Itch* may be classed under the head of *Impetigo*: they are all the result of irritation of the skin.

ITER AD INFUNDIBULUM (Latin *iter*, a way or journey). A name given to the passage of communication between the third ventricle of the brain, and the *Infundibulum* (which see).

ITER A PALATIO AD AURUM. The passage from the palate to the ear. This is by anatomists commonly called the Eustachian Tube. See *Ear*.

IVORY. The substance of which the tusk or tooth of defence of the male elephant is composed, as well as the tusk of the walrus, the horn of the rhinoceros, and some other animals. In its nature it appears to be something between bone and horn, not so hard and brittle as the former, nor capable of being softened by fire, like the latter. Guillot obtained from 100 parts of Ivory, 24 of Gelatine, 64 of Phosphate of Lime, and 0.1 Carbonate of Zinc.

IVORY BLACK, or Animal Charcoal, is made by exposing bones and other animal matters in iron cylinders to a red heat, allowing the effluvia to rise through a pipe.

IVY. This, which is the *Hedera Helix* of botanists, can scarcely be called a medicinal

plant, although its leaves are sometimes used to dress issues and cover inflamed surfaces; the berries are purgative, and the trunk yields a gum.

Ground Ivy is a pretty little trailing plant, of the natural order *Labiata*, called by botanists *Nepeta Glechoma* (of this we give



a cut); it has a strong smell, and aromatic taste, and is thought to be gently stimulant and tonic, aperient, diuretic, and corroborant, with a particular action on the lungs and kidneys. The leaves were formerly thrown into the vat with ale, to clarify it and give it a flavour. It has long been a popular remedy for coughs, pulmonary complaints, and urinary affections.

JACK BY THE HEDGE. The popular name of a native plant sometimes called *Sauce alone*; it is the *Erysimum Alliaria* of botanists, smells strongly of onions, and has stimulant, diuretic, and errhine properties—the last residing in the seeds.

JACKSON'S BATHING SPIRITS. A composition sold under this title was, at one time, in good repute as a remedy for rheumatic and other complaints; it was little else than soap liniment scented with essences.

JALAP or JALOP. The tuberous root of the *Ipomœa Purga*, a Mexican plant of the

natural order *Convolvulaceæ*, contains a peculiar resin which has strong cathartic properties. This is one of our commonest and most valuable purgatives, but it is used far too indiscriminately; for in irritable conditions of the bowels, or in weak states of the system generally, it is productive of mischief, on account of its active and drastic nature; it produces watery evacuations, and often nauseates and gripes. The resin is sometimes extracted and given alone, but more commonly in combination with the woody fibre; the Ground Root being the general form of administration: the dose is from 2 to 5 grains for children; from 10 to 30 grains for adults. It is sometimes



given as a vermifuge, especially if combined with a little Calomel. This drug derives its name from Xalapa, in Mexico, whence it is chiefly imported. The chief officinal preparations into the composition of which it enters are—the Extract, dose from 5 grains to a scruple; Pill Jalap with Colocynth, 5 to 10 grains; Compound Powder, in which it is combined with Cream of Tartar and Ginger, 1 scruple to a drachm; Tincture, 1 to 3 drachms; Resin, 3 to 12 grains; Mixture, 1 ounce to 1½ ounce; there is also an old preparation called *Sapo Jalapinus* (Soap and Jalap) made with equal parts of Castile Soap and Jalap, digested in alcohol, and evaporated to the consistence of a conserve; but it is seldom or ever used now. *Jalapine*, which is the alkaloid, or active principle of Jalap, may be sometimes given with advantage under careful superintendence; but it is too powerful for domestic use; the dose is about the ½ of a grain; the smallness of the quantity required, renders it a good mode of administering this nauseous drug, but it should never be entrusted to ignorant hands.

JAMAICA PEPPER. See *Allspice* or *Pimento*.

JAMES' ANALEPTIC PILLS consist of equal parts of James' Powder, Gum Ammoniacum, Aloes, and Myrrh, made up with Tincture of Castor: they once enjoyed a high reputation.

JAMES'S POWDER.—This is one of the few patent medicines that the profession really recognize and recommend; it has long been celebrated as a fever powder, and is supposed to be almost, if not quite, identical with the Compound Antimonial Powder of the Pharmacopœia, which is given as an alterative in doses of from 1 to 3 grains; as a diaphoretic, from 3 to 8 grains; in larger doses it is emetic and purgative; in the febrile states and conditions of children, when the vascular action requires lowering, this is commonly given in combination with Calomel; it is found useful in these cases, but, as a general rule, preparations of Antimony are not to be recommended, especially to the domestic practitioner.

JAPAN EARTH (in Latin *Terra Japonica*). This was at one time supposed to be a mineral production, although it is in reality a product of vegetation, being procured from the *Acacia Catechu*, or khair tree. It is to the darker kind that the above name was commonly applied, that from Bombay; the paler sort, or Bengal Cutch, more usually bore the name of Catechu (*Jatropha Manihot*, *Mandiooca*, which see), a plant of the natural order *Euphorbiaceæ*, remarkable for the differing properties of its several parts, the Leaves being used as a common esculent, while the root secretes a most virulent poison, which same root, when roasted, becomes a wholesome and nutritious article of food. In the seeds, the albumen is harmless and eatable, while the embryo itself is acrid and dangerous. The fecula which the root yields is much valued in South America, and has been introduced into this country as an article of diet, under the name of *Cassava* (which see), also *Tapioca*.

JATROPHIC ACID. An acid procured from croton oil, which, in the preparation, is first converted into soap; it is more commonly called *Crotonic Acid*.

JAUNDICE (in Greek *ikteros*). A disease proceeding from an obstruction of the flow of bile in the liver, and characterised by a yellow colour in the skin; it was formerly called *morbus regius*, *morbus argentus*, *aurigo*, &c.

The peculiar effects which we notice in jaundice are occasioned by the absorption of

bile into the circulation, owing to some impediment to its passage in the usual way from the liver. The most common obstructions are *Gall-stones* (which see); tumours which press upon the duct; or spasm, causing constriction of the same, may also be the cause; and sometimes strong mental emotion. In this disease we notice that the white of the eye acquires a yellow colour, varying from the slightest tinge to that of gold; the whole of the skin of the face, too, and sometimes of other parts of the body, assumes the same tint; the stools become white and chalky-looking, and the urine, and sometimes also the perspiration, is tinged with bile.

Of itself this is not a dangerous disease; but, as symptomatic of organic mischief going on somewhere, it should be viewed with fear, and have immediate medical attention.

The *treatment* should be an avoidance of rich or fat foods, such as promote the secretion of bile, and all alcoholic stimulants. From 5 to 8 grains of Chalk and Quicksilver (grey powder) may be given at bed-time, and a Black Draught, or Castor Oil, in the morning. If there is much pain, 5 grains of Extract of Henbane, or Hemlock, may also be given at night; and as there is generally more or less of acidity, a mixture composed of 1 drachm of Carbonate of Soda, 2 grains of Extract of Taraxacum, and 6 ounces of Plain or Cinnamon Water, may be given; two table-spoonsful every 4 hours.

JELLY. A soft tremulous substance, made, in the case of *animal jelly*, from the skin, membranes, bones, or cartilages of animals (see *Gelatine*); and in the case of *vegetable jelly*, from the pulpy juice of certain fruits, as currants, &c.; this latter consists of mucilage and vegetable acid; it is preferable to jams for invalids, on account of its clearness and freedom from skins, or stones, or other indigestible parts of the fruit, of which it is made. Of the animal jellies, those prepared from calves' and neets' feet are the most strengthening. Isinglass is very good made in this way:—Boil 1 ounce of Isinglass Shavings, 40 Jamaica Peppers, and a bit of brown crust of bread, in a quart of water, to a pint, and strain it. This makes a pleasant Jelly to keep in the house; a large spoonful may be taken in wine and water, milk, tea, soup, or any other vehicle that may be most agreeable.

The above receipt is from "The Wife's Own Book of Cookery;" in which also will be found directions for preparing tapioca, rice, hemp-seed, and various kinds of Jelly suitable for persons in delicate health. The

following is so excellent and strengthening an article of diet for invalids, that we are tempted to extract it also:—Put into a jar 2 Calves' Feet with a little Lemon Peel, Cinnamon, or Mace, and equal quantities of Milk and Water to cover them; tie over closely, and set in a slack oven for about 3 hours; when cold take off the fat, and sweeten and warm when required.

JERUSALEM ARTICHOKE. The *Helianthus Tuberosus*, a species of sunflower, the root of which resembles the true Artichoke in taste; neither of these are adapted for persons of weak digestion; they should be especially avoided by the flatulent and aged. On some persons the true Artichoke acts as an aperient. See *Cynaria*.

JESUITS' BARK. This term was formerly applied promiscuously to several kinds of Bark used as a tonic and febrifuge. See *Cinchona*.

JESUITS' DROPS, A nostrum formerly much esteemed as a stomachic and purifier of the blood; it was also reckoned a remedy for rheumatism: this is the form of preparation:—Digest 5 ounces of Sarsaparilla Root, 7 ounces of Gum Guaiacum, and 4 drachms of Balsam of Peru in 2½ pints of Alcohol for about a fortnight, shaking and warming occasionally; filter for use.

JOINT, scientifically called *Anthrosis* or *Articulation* (which see). The diseases of the Joints—1, *Hydrops articulo*, a collection of serous fluid in the capsular ligament of a Joint; 2, *Spina ventosa*, the former name for white swelling (see *Knee*); 3, *Morbus coxarius*, disease of the hip, called scrofulous caries of the *Hip-joint* (which see).

JUDAM or JUZAM. Arabic terms for the disease called *Elephantiasis* (which see). According to Niebuhr, it is at the present day called *Dsjuddam*, and *Madsjuddam*, in Arabia and Persia.

JUGLANS (query *Jovis' glans*, Jupiter's nut). A name applied to a genus of plants belonging to the natural order *Juglandaceæ*. In this genus we find the American hickory and the walnut tree, scientifically called *J. Albea* and *J. Regia*.

JUGULI OS (Latin *jugum*, a yoke). The zigoma, or arch formed by the zygomatic processes of the temporal and cheek bones; sometimes called *Os zygomaticum*.

JUICES OF PLANTS. These contain all the proximate principles of plants which are soluble in water; they are generally extracted by pounding the plant in a marble mortar, and then putting it into a press, which squeezes out all the liquid. Some

plants contain so little Juice, that water must be added to obtain it, and some have so much mucilage that the Juice is viscid and will not flow, to that, therefore, water must be added. Juices which are not acid, and not very mucilaginous, will settle of themselves, and become clear; some must be clarified by fermentation or otherwise. Those plants which have antiscorbutic properties abound in saline volatile particles, which it is necessary to preserve; if subjected to heat, therefore, they must be enclosed to prevent the escape of those particles, on which their medicinal virtue chiefly depends; the qualities of most Juices are injured by fermentation; the most usual method of clarifying those which are mucilaginous is to boil them with White of Egg, or other albuminous matter. Juices of Plants do not keep well, therefore they are seldom used in a fluid state, but mostly in the form of *Extraets* (which see).

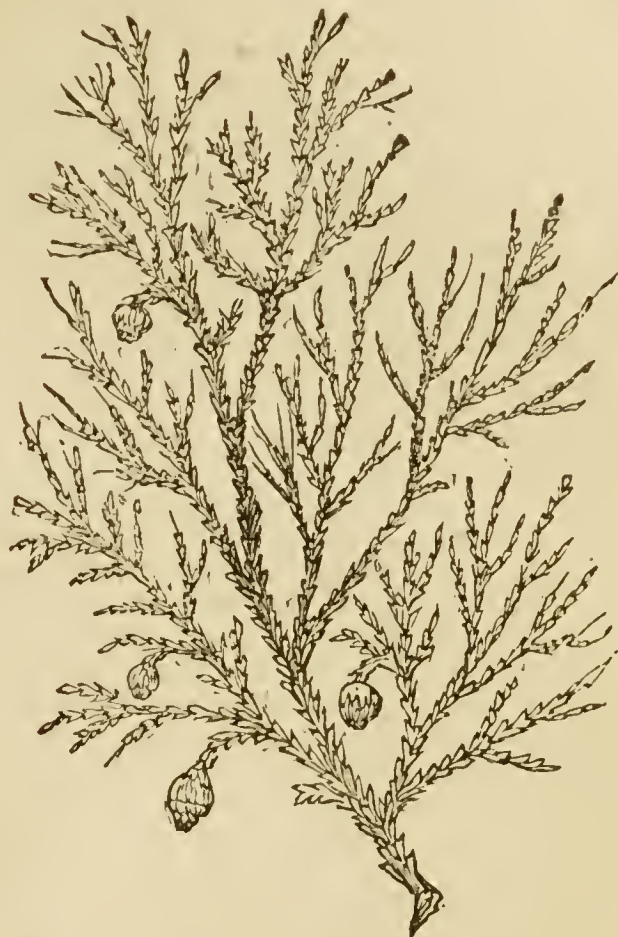
JUJUBES (*Arabic jujubæ*). The fruit of the *Rhamnus Zizyphus* of the natural order *Rhamneæ*. A kind of lozenge introduced by the French under the name of *Pate de Jujubes*, has lately obtained much favour in this country; the ingredients of which they are, or ought to be prepared, are the juice of the above fruit, with raisins, sugar, and gum arabic. In coughs, bronchial affections, and dry states of the trachea, they may be taken with pleasure and advantage.

JULEP. A term found in old Pharmacopœias, but not now used in medicine, as it expressed what we now understand by mixtures; thus camphor mixture was formerly called camphor julep. Recently the name has, in America, been revived, and applied to various kinds of drinks, most or all having an alcoholic basis.

JUMBLE BEADS. The seeds of the *Abrus Preeatorious*, or Wild Jamaica Liquorice, reputed to be *Cephalic*, (which see).

JUNIPER. The Latin name *juniperus* is applied to a genus of plants of the natural order *Coniferæ*. One member of the genus is the Lycian Juniper (*J. Lyeia*), from which it is said we obtain the *Olibanum*, *Thus*, or *Frankineense* of commerce: (see latter head). Another is the *J. Sabina* or *Savine* (which see); but the common juniper (*J. Communis*) is that with which we are best acquainted; its berries yield a volatile essential oil, upon which the flavour and diuretic properties of the spirit called Geneva principally depend. English gin, we find, has more of turpentine than of this oil in it. The berries of our common native Juniper, when ripe, are of a purplish black colour; they have a strong aromatic odour

peculiar to themselves, and a flavour much like that of turpentine; they are aromatic, stimulating, diuretic, and diaphoretic, and are chiefly employed as an adjuvant to other remedies, and to increase the flow of urine



in cases of dropsy: the dose of the Berries themselves is from 1 to 3 drachms, they may be taken in powder; but the Oil or Compound Spirit is more frequently administered; the dose of the former is from 4 to 6 minims; of the latter from 2 to 4 drachms. An Infusion of Juniper Tops is sometimes taken; it may be prepared thus:—Fresh Tops of the Plant, 1 ounce; Boiling Water, 1 pint; infuse for 2 hours, and strain. take a wine-glassful twice a day—it is best, however, used as a vehicle for other diuretics.

In some parts of Europe, Juniper berries are roasted, ground, and used as a substitute for coffee; they are, also, employed in Sweden and Germany, as a conserve, and as a culinary spice, especially to give a flavour to that favourite dish of the Germans *Sourerout*. The gum Sandarac, which exudes from one of the species of Juniper, constituted, when powdered and sifted, the substance called *Pounce*; and the Oil of Juniper mixed with nut-oil makes an excellent varnish for pictures.

JUVANTEA (Latin *juvo*, to assist). A name sometimes applied to medicines which assist

in relieving the urgent symptoms of diseases.

KALI. A term of Arabic origin, denoting a particular plant, and generally applied with the article *al*, to the residuum obtained by lixiviating the ashes of the plant; we now apply the term to a large class of bodies possessing certain properties. (See *Alkali*).

In the old Pharmacopœias we find that *kali* generally stands for *Potash* (which see), as in the *Kaliacetatum*, Acetate of Potash; *K. preparatum*, Subcarbonate of Potash; *K. purum*, or *fusa*, Fused Potash; *K. tartarizatum*, Tartrate of Potash; *K. vitriolatum*, Sulphate of Potash, &c.

KEDERIA TERRESTRIS. A mineral tar or naphtha, commonly called *Barbadoes Tar* (which see).

KELP. The ashes of sea-weeds or *fuci*, chiefly used in the manufacture of soap and glass; it is also largely employed in bleaching; but we are chiefly concerned in noticing it, as containing a considerable quantity of soda, and yielding that valuable product, Iodine. Common Kelp contains but 2 or 3 per cent. of soda; but that obtained in France and Spain, called *Barilla*, has from 14 to 20 per cent. About the Hebrides and other parts of the Scottish coast, this article is obtained in large quantities, and it may be had on most sea-shores, interior salt lakes, and indeed, wherever the soil or the water is impregnated with saline particles. See *Iodine*, *Soda*.

KERATININGS (Greek *keras* or *keratos*, a horn, and *nyssō* to puncture). In Germany they employ this term to denote the operation of couching, as performed through the cornea. When the opaque lens is by this means merely turned, presenting its anterior and posterior surface in the horizontal position, it is called *Rectination* (which see), also *Couching* and *Eye*.

KERMES. A term of Persian origin applied to an insect nearly allied to, if it be not of the same species as the true Mexican Cochineal, found upon the *Quercus Ilex*, a kind of oak growing in the south of Europe; the ancients supposed this to be the fruit of the *Ilex*, and hence called it *Coccus Ilicis*; they employed it as a scarlet dye, calling it *Cocinin*, and the persons who wore cloth dyed with it, *Coccinati*. The rich colour called carmine, was formerly prepared from the Kermes, but is now obtained from the *Coccus cacti*, or *Cochineal* (which see).

KERMES MINERAL, formerly termed *Panacea glauco-urina*, was so named for its resemblance to the above insect; it is properly Sulphuret of Antimony, and differs from the Golden Sulphuret, in containing a larger

proportion of Sulphuretted Hydrogen. See *Antimony*.

KETCHUP. The prepared liquor of Mushrooms, much used as a sauce. So commonly is this article adulterated, that it is scarcely ever safe to purchase it for family use; very frequently so-called Mushroom Ketchup, has really nothing whatever of the esculent fungus in it, and analysis has shown in some samples, a strong impregnation of copper, from being made in a vessel of that metal: the green husk of the walnut to impart colour, with pimento, garlic, common salt, and Cayenne pepper, boiled in water, and added to the residue left after the process of obtaining distilled vinegar, has been found to be the composition of some samples. It is, therefore, best for every housewife to make her own Ketchup, and to aid her in the process, we give a good form:—Take 4 pounds of good mushrooms, the large dark sort are the best; break them up, and sprinkle over them about the same weight of common salt; let them stand a day or two, stirring up the mixture occasionally, this should be done in an earthen pan; then strain off the liquor, and add to it 8 ounces of pimento, 1 ounce of Cloves, and 1 of Ginger Root sliced; boil gently about an hour, then strain through a flannel bag; bottle and cork tightly. The residue of the Mushrooms and Spice may be boiled again, for an inferior kind. A quart of Red Wine to every gallon, will make the first boiling very good and rich. (For walnut and other Ketchups, see *Wife's Book of Cookery*).

KIDNEYS (Latin *renes*). Two glandular bodies situated in the lumbar region, whose office is to secrete the urine from the blood: their exact position is on either side of the spine, in what is usually called the small of the back, where they lie imbedded in fat; each of them is supplied with blood by vessels which issue directly from the aorta, and from each of them issues a duct called the ureter, which conveys the urine to the *Bladder* (which see). The Kidneys are composed of two very different structural arrangements; the outer, or cortical portion being, as it were, granulated, and the inner being fibrous, arranged in pyramids or cones, with their bases resting upon the cortical substance, and their apices or points opening into a central cavity, the pelvis, or as it has been called, the brain of the Kidney, which may be regarded as an expansion of the upper portion of the ureter, which is about the diameter of a goose-quill, and eighteen inches long, passing behind the bladder, and entering that organ at its lower

part. The granulated appearance of the cortical portion of the Kidneys is owing to the globular expansions of the roots of the capillary tubes, which form the cone-like structures of the inner part, and present, when viewed through the microscope, a very beautiful arrangement, consisting of bundles or fasciculi of hair-like filaments; each bundle together forming what is called a process, and opening into one of the calices of the pelvis, in a nipple-like projection, having several minute orifices. On all these, little canals, called *tubuli uriniferæ*, tiny blood-vessels ramify and spread down to the rounded communicators to which we have just alluded, and which are sometimes called the *corpuscles of Malpighi*; here it is that the urine is secreted or separated from the blood, and from thence it is conveyed by the tubuli into the calices, and then through the pelvis of the kidneys into the ureter, to be received in the great reservoir, the bladder; from thence, by means of muscular contraction, to be forced out by the proper channel, when a sufficient quantity has accumulated.

Each Kidney together forms a firm fleshy mass, which is enclosed in a fibrous capsule, the outer and tougher membrane being lined with a soft and smooth mucous membrane which forms a continuation of that which lines the ureter and the bladder; we need scarcely say that the shape is about that of a kidney bean.

Diseases of the Kidney, or renal diseases, as they are sometimes called, are generally difficult of treatment; the most common are those which result in the formation of *calculi*, or stone, which is sometimes retained in the pelvis, where, by constant deposition, it increases so as completely to fill that and the calices which open into it, causing a stoppage in the flow of the secretion, and a most dangerous state of constitutional derangement. Generally, however, the stone passes through the ureter into the bladder, producing in its passage violent spasmodic pains in the loins, with nausea, and generally hæmorrhage, &c. With this we commonly get inflammation of the Kidneys, or *Nephritis* (which see), from which abscesses and other morbid alterations are likely to result. From chronic inflammation appears generally to arise that alteration in the structure of the kidneys known as *Bright's Disease* (which see); the chief characteristics of which are the deposition of a pale yellowish substance in the interstices of the organs, leading to a granular, or tuberculated form of the surface, and a decreased vascularity of the whole organ,

whose diseased condition is indicated by a dull heavy pain in the loins, a hard pulse, and a secretion of so large a quantity of albumen in the urine, that it coagulates on being heated, or with the addition of nitric acid. This condition of the Kidneys is sometimes the result of hard drinking; it sometimes follows scarlet fever, and usually produces dropsy, in which case we have a bloated expression of countenance. Suppression of urine may be the ultimate result of obstruction of calculus in the ureter, or it may occur as an idiopathic disease; in either case it is a condition of great danger. In common with other organs, the Kidneys are also subject to various morbid growths and depositions, such as cancer, fungus, hæmatodes, melanosis, tubercle, &c.; but the diagnosis of all chronic affections of these organs is very difficult, owing to the similarity in their symptoms; the dull heavy pain in the loins, dropsy, and sometimes hæmaturia, being common to all. We can, therefore, scarcely venture to indicate any particular line of treatment. A medical man should be consulted as soon as possible when there is reason to suspect all is not right with this important organ, to which, we may just observe, that injury often results from long-continued and violent exercise on horseback; also from collections of hardened stools in the colon, as well as from retrocedent gout, a blow, or violent exercise of any kind. More will be said on this subject under the head of *Urine* and the *Urinary Organs*.

KING'S EVIL. In Latin *Morbus Regius*, a scrofulous disease, the curing of which was formerly attributed to the touch of a king's hand. The practice of *touching for the evil*, as it was called, prevailed in England from the time of Edward the Confessor. The popular faith in this superstitious practice had, in the time of Charles II., arisen to such a height, that no less than 92,107 persons presented themselves to be touched in the course of fourteen years, and of these, it is recorded by Wiseman the king's physician, they were nearly all cured. It was officially announced in the London Gazette of 12th March, 1712, that Queen Anne intended to touch publicly for the Evil; but after this time, the practice was wisely discouraged, and finally dropped by George I., 1714. See *Scrofula*.

KINIC ACID. A name given by Vauquelin to a peculiar acid, which he first extracted from Cinchona; its salts are called *Kinates*, but are little used.

KINO. An extract obtained from several trees of the genus *Pterocarpus*, of the

natural order *Leguminosæ*, but chiefly from the *P. Marsupium*, a native of India; this substance occurs in small angular shining fragments, of a deep reddish brown colour; it is, perhaps, the most powerful of all the vegetable astringents, containing about 70 per cent of tannic acid; hence its use in diarrhoea, dysentery, gonorrhoea, leucorrhoea, and internal bleedings and discharges generally. It is also employed as an external application to foul ulcers, as a gargle to constrict relaxed uvulae, and as a styptic. The dose of the Powder is from 1 to 2 drachms; of the Compound Powder (which contains 1 grain of Opium to 20 grains of Kino,) from 10 to 20 grains; of the Tincture from 1 to 2 drachms. (See *Astringents*).

In India an aqueous solution of Kino is used for dyeing the colour called *nankeen*, in cotton and other cloths.

KIRCH-WASSER. A liquor distilled from the fruit of a small cherry tree, and called the Brandy of Switzerland; it is also prepared in the Black Forest and various parts of Germany, as well as sometimes in this country; as an article of luxurious diet, but not being one which we can recommend, we abstain from giving a form of preparation.

KNEE. This is one of the most important joints of the body, and perhaps that which is most open to accident and serious affections; it is formed by three bones, viz.: the lower extremity of the thigh bone, the upper one of the larger leg bone, and the *knee-cap*, or "patella," which lies on the front of the joint, and receives most of the blows which fall on that part of the body, hence it is not unfrequently broken. Besides protecting the joint in front, this patella affords the muscles of the thigh a leverage, and so enables them to act more powerfully on the movements of the leg. The entire joint is fitted and bound together with cartilages and ligaments, and if these, and the muscular tissues which surround them become the seat of inflammation, very serious mischief is commonly the result. Pressure from much kneeling on the part, violent blows or wounds, and sometimes constitutional causes, will produce this. In any case, there will generally be the outward marks of inflammatory action, redness, swelling, and acute pains, and the best treatment, in the absence of professional advice, is free leeching, with warm fomentations and poultices at first, afterwards cold lotions: the system should be reduced by low diet, and opening medicines; there should be perfect rest for the limb, which had better be slightly elevated.

For treatment of *Fracture or Dislocation* of the Knee-cap, (see those heads; also *Patella*). We sometimes have in this joint what is known as "loose cartilage," in which a rounded, gritty body lies loose within the joint and interferes with the motions, causing great pain, and often sickness, and a tendency to fall down, in the patient; this is a purely surgical case, and is not at all open to domestic treatment. For further particulars on this head, see *Leg.*

KORE. Greek for the pupil of the eye. Hence we have the following terms applied to operations for artificial pupil, which is technically called *Kore-symphosis*:—1. *Korectomia* (Greek *ektome*, excision), the operation by excision, sometimes called *Iridectomia*; *Kore-dialysis* (the latter word being Greek for loosening), the operation by separation, or *Irido-dialysis*; *Kore-tomia* (Greek *tome*, section), the operation by incision (see *Eye*).

KOUMISS. A vinous liquid, made by the Tartars from milk, principally that of the mares; the Turks have something similar under the name of *yaourt*, and the Arabs under that of *liban*. A similar liquor is also prepared in the Scottish isles, but not to any great extent.

Koussou. The dried flowers of the *Bragera Anthelmintica*, of the natural order *Rosaceæ*. An Abyssinian remedy for tape worm, recently introduced into this country. Tannic Acid, and a volatile oil, have been extracted from the plant, and in these its active principles appear to reside. Dr. Plieninger first brought the remedy to Europe in 1834, but it did not come much into notice until 1850; its great expense precluded its extensive employment for a considerable time, but it has lately been imported in large quantities from Aden, and may now be had cheap enough. One great objection to its use is the large quantity required for a dose, viz., $\frac{1}{2}$ an ounce of the Powder, which must be infused in warm water, and taken unstrained; it may be rendered a little palatable with honey and lemon juice. Like all anthelmintics, it acts best on an empty stomach; its operation is that of a drastic purgative, yet it should be followed up with a dose of Castor Oil. The drug has, probably, been much overpraised; we do not consider it so efficacious as the Oil of Male Fern. See *Verminifuges, Worms*.

KRAMERIA TRIANDRIA. The botanical name of a plant of the natural order *Polygalaceæ*, possessing tonic and astringent properties; it will be more fully

described under its common name of *Rhatany*.

KRIEBEL KRANKHEIT. The German name of a disease, which was endemic at Hesse and Westphalia during a season of dearth in 1597. It has also been called *die Fever-flecke*, *Ignus sacer*, *Mal des ardens*, *Ergot*, &c. It has been placed by Sauvages under the head of *Erysipelas pestilens*, and by Sager, under that of *Necrosis*. See *St. Anthony's Fire*.

LABDANUM or LADANUM. A blackish resin, the product of a species of *Cistus* found in Candia and elsewhere; it is formed into cylindrical pieces, called *Labdanum in tortis*. It has been principally used in stomachic plaisters and perfumes. A preparation, called *Labdanum factitum*, composed of yellow wax and lard, of each 6 ounces, and burnt ivory or bone 4 ounces, was formerly held in some repute.

LABIA, plural of *labium*, Latin for the lip. Hence, we have the terms—*Labia leporina* (from *lepus*, a hare), *Hare-lip* (which see). *Labia pubenda*, the parts of the *pubendum* exterior to the *Nymphæ* (which see). *Labiatae* is the mint tribe of dicotyledonous plants, which are universally characterised by the presence of an aromatic volatile oil, and a bitter principle. Many of these plants are used in medicine, such as the Peppermint, Spearmint, &c.

LABORATORY (Latin *laboro*, to labour). A place fitted up for the performance of chemical operations.

LABOUR, in the ordinary sense of the term, as applied to hard work, may well form a subject for a few observations in a work like this, treating of the physiology of health and disease. We have this term from the Latin root *labo* to fail, and we may define it as an exertion of muscular strength, or bodily exertion up to the point of weariness, when the strength fails. Labour is undoubtedly healthful; it exercises the muscles, tends to the development of the physical powers, and promotes a healthy action in all parts of the frame. When God issued the fiat that Man should earn his bread by the sweat of his brow, he beneficently, as well as wisely, ordained, that, in thus labouring for a subsistence he would be also conducing to such a vigorous state of bodily health as would best enable him to enjoy life: work, therefore, is good for all, and none should repine that they are called on to Labour; but rather rejoice in the exercise of that physical strength with which they are gifted, in order that they may be useful to themselves and others. A life of idleness is a life of misery; the bodily and

mental powers waste and decay if they be not exercised: let us then Labour cheerfully, remembering that by so doing we not only promote our own health, but also glorify God; for truly if it be done in the right spirit, *Laborare est orare*—work is worship, as the adage runs.

LABOUR, or Childbirth. Under this head it is desirable that we should make some extended observations, as the subject is one of the most important that can engage the attention of our readers. Every prudent female, who has the power of doing so, will make all necessary preparation for an approaching *accouchement*, as the French term childbirth or delivery. She will have been forewarned by certain unmistakeable symptoms that she is about to become a mother; and if this be a new position, a whole world of fresh cares and duties will be opening before her. Through much anguish and suffering, and some danger, she will have to pass, before she can clasp to her bosom the little helpless creature to which she is about to give birth, and feel, with a rapture unspeakable, its heart beat against hers: and when she can rejoice in the knowledge, that a babe is born unto her—when returning strength assures her that her sore travail is for the time ended, there is yet much to make her careful and anxious. The life of the infant hangs by a frail thread, which a slight accident or piece of mismanagement may suffice to snap, and she herself may be easily rendered incapable of bestowing on it that care and attention which only a fond mother can give.

Few women, who are near their confinement, are sufficiently cautious of exposing themselves to unnecessary fatigue and atmospheric changes; they will “keep about until the last,” and it is well for them to do so, provided they take only gentle exercise, and avoid getting wet or chilled, or heated in crowded assemblies, and the like. Miscarriages, difficult labours, and frequently lasting injury to mother and child, if not the death of one or both, is not unfrequently the result of imprudence, at this critical period; therefore would we impress upon all our readers who are likely to become mothers, the duty which they owe to themselves, their friends, and their future offspring, of refraining, when enceinte, as much as possible from the more exciting pleasures and laborious occupations of life, and of preparing for the pains and cares which will shortly come upon them. That they may be in a fit state to bear the first, and perform the second, the bodily health should be strictly attended to, and the mind kept, as free as possible from aught which

would harass and annoy it. Let all the preparations for the little stranger be made in good time, and the services of an experienced nurse engaged. If the advice and assistance of a mother, or other near relative, can be obtained, for this time of trial and anguish, by all means let it be so; then it is that the womanly nature looks for that sympathy and support, which only a woman, and scarcely any other than a mother, can render. Let then, the parent, or some female very near and dear, be at hand to aid and counsel, and, above all, to cheer and encourage the often-sinking heart, not only at the actual period of the Labour, but for some time previously. And let the mother in expectancy be treated with all possible love and gentleness. She may be fidgetty and whimsy, what of that! provided they do not run into outrageous extremes, let her very whims be indulged. She is frequently in a state of great nervous excitement; her body may be racked with pain, and her mind unhinged. Let her be soothed and tenderly dealt with; she has that to go through, at which the strongest man might well tremble, and shrink aghast.

We will suppose that the inevitable hour has come; that the surgeon is ready and skilful; the nurse thoroughly up to the performance of her duties, and the female friend encouraging and self-composed; the Labour pains are regular, and the work of delivery proceeds properly, although, perhaps, slowly. In due time—it may be in two hours, or four or six, or even, in the case of a first child, twenty-four hours, the infant is born, and treated according to the directions given under the head *Infant*. But we are getting on too fast, and must go back to explain what has been, or should have been done to bring about the desired consummation of a safe delivery, and what is of yet more consequence, the safety of the mother and child, and the gradual recovery of the former from the shock which, under the most favourable circumstances, her system will receive. If she be a strong healthy woman, and no unusual complications arise to disturb the natural process, but little aid or interference may be required. There will be the usual warning symptoms—intermitting pains in the back, slight at first, but increasing in intensity; there will probably be a slight discharge of mucus, stained with blood, and perhaps also a considerable discharge of a clear fluid, popularly called “the waters;” this is an albuminous liquid filling up the membrane in which the foetus floats, and so preventing pressure; it sometimes does not escape un-

til Labour has actually commenced by the falling down of the child into the pelvis. When this takes place the recumbent position should be assumed; previous to this it is best for the patient to sit upright or walk gently about, and so assist the action of the uterus.

When the Labour pains become very great, the patient should be placed on the bed, previously guarded by some waterproof material on her left side, and not far from the edge, so that needful assistance can be easily rendered. She should have a tightly-rolled pillow placed between her knees. If there is no unnatural obstruction to the delivery, it is best left to nature; should the patient in the struggle become very faint and weak, a little brandy-and-water may be administered at short intervals, but this must be stopped as soon as the Labour is over, or inflammatory action may ensue. A uterine stimulant may be given if the womb does not contract with sufficient power to expel the child (see *Ergot of Rye*); but this should be only under the direction of the medical man, who ought certainly to be present in all cases of difficult parturition. It would be useless in a work like this, intended for domestic treatment, to give directions for modes of procedure in such cases; only, if a surgeon were unattainable, and if there were actual danger of a patient perishing for lack of assistance, then alone would a nurse be justified in the administration of any such powerful medicine as this, or in attempting to assist the operation of delivery by unusual means.

As soon as the child is born, and the umbilical cord, or, as it is commonly called, the navel string, by which it is attached to the womb, has been tied and cut, as directed under the head *Infant*, a broad bandage or towel should be passed round the body of the mother, so as to cover the hips, drawn tightly, and pinned or tied, so as to sustain a pressure upon the womb, and stimulate the vessels to return to their normal condition. Before this is done, however, it will be best to pull that part of the above-named cord which remains attached to the uterus very gently, and by this means to accomplish if possible the removal of the placenta, commonly called the after-birth, which sometimes comes away with the child, or immediately after, and is sometimes only removed with great difficulty: if, at the expiration of a couple of hours or so, this still remains in the womb, where it will cause irritation, the hand of the nurse or medical man, previously well oiled, must be carefully passed in, so as to grasp and,

without breaking it, to detach it gently from its adhesion, and bring it away, waiting to complete the process until an after-pain comes on. Generally the natural expulsion, or the artificial removal of the placenta is attended with hæmorrhage, sometimes to a frightful extent; (for directions how to proceed in this case, see *Flooding*.)

For at least six hours after Labour, the patient should be disturbed as little as may be. We have seen fussy nurses very desirous of making "missus" comfortable, and begin to put things to rights about her, when she, poor soul! only wants perfect rest and quiet. Let her have it. And if the pulse is thin and feeble, and the cheeks are colourless, and the breathing scarcely noticeable, so that life seems almost ebbing away, put a little, a very little Brandy and Water, warm and sweet, between her lips now and then; but stop it instantly if it produces flushing or restlessness; and do not give it at all unless there seems urgent necessity for a stimulant. At the expiration of the above time, if a revival has taken place, the soiled bed-clothes and body-linen may be changed; but all this should be done very carefully and gently, or the fatigue may occasion a relapse. If the after-pains continue severe at the expiration of the above time, an anodyne draught may be given; it may be composed of from 20 to 30 grains of Tincture of Opium, or a $\frac{1}{4}$ of a grain of Morphine, in an ounce of Plain or Spearmint Water.

For eight or more days after a Labour the recumbent position should be strictly maintained; and the same rule holds good after a *Miscarriage* (which see). Some women feel so well and strong in a day or two, that they will sit up, and sometimes even get out of bed, and make themselves useful in the house. We have seen a woman at the wash-tub three days after she had been confined; and we have heard of females undergoing the pains of labour under a hedge by the road-side, and in a few hours proceeding on their journey with their babes at their breasts. But these women were semi or entire barbarians; they had not been delicately nurtured. With the immense advantages, we must also take some of the disadvantages of civilization, and those who give birth to children surrounded by all its comforts and luxuries, must not attempt to emulate the Indian squaw, or the scarcely less favoured labouring woman of our own country, in this respect; if they do they will inevitably suffer for their temerity. Getting about too early after childbirth is, perhaps, the most fruitful of all sources of uterine

disease. The consequences may or may not show themselves at once, but whether or no, bad consequences there will most likely be; therefore we warn all mothers to keep their beds long enough; but little exertion should be made until the end of the first fortnight: if there is a necessity for getting about earlier, of course it must be done, for necessity has no law; but unless there is, the risk should not be run; delicate women especially do wrong to attempt it, and the strong will be likely to render themselves weak by the practice. See *Lying In, Milk, Parturition, Pregnancy, &c.*

LABURNUM.—This tree, the *Cytisus Laburnum* of botanists, is well known as one of the greatest ornaments of our shrubberies; but not for that reason is it introduced here; we have given it a place as being one of the poisonous plants against which we would warn our readers: its seeds are violently purgative and emetic, producing, when eaten, vomiting, delirium, and stupor, with great pain in the abdomen and violent diarrhœa. The best treatment is to get rid of them, as quickly as possible, by a Mustard or other emetic, and to counteract their depressing effect by Ammonia and Brandy.

LABYRINTH (in Greek *labyrinthus*, a winding passage.) A term applied in surgery to several cavities in the ear, situated between the tympanum and the external meatus. These are 1st, the *vestibule*, or entrance into: 2nd, the *cochlea*, which is constituted by the *modiolus* or central pillar, which is encircled by the *lamina spiralis*, and terminates in the small cavity called the *infundibulum*; it is divided by the *spiral septum* into two smaller cavities called the *gyri*, and the aqueduct opens above into the tympanum, and below into the posterior petrous portion of the temporal bones: 3rd, the *semicircular canals*, situated in the substance of the above-named bone, and opening into the vestibule by fine orifices. See *Ear*.

LAC. Latin for milk. A term in medicine applied to compounds which have a milky appearance. Preparations which were so called in the old Pharmacopœias, are now termed *Mixtures* and *Emulsions* (which see): thus we read of *Lac Ammoniaci*, *Amygdalis*, *Assafœtidæ* and *Guaiaci*; Milk, or Mixture, of Ammoniacum, Almonds, Assafœtida, and Guaiaecum; and to these may be added, *Lac Sulphuris*, Milk of Sulphur, the washed and precipitated powder of that mineral. Then we, in surgery, apply the term *Lacteals*, to the organs which perform the office of secreting the milk; those glands and minute vessels, situated in the breast (for an

account of which see *Mammæ*); and a *Lactifuge*, is any medicine which checks or diminishes this secretion of the *lacteal* fluid as we sometimes call *Milk* (which see.) And again, *Lac lunæ*, literally milk of the moon, is a white substance resembling chalk, and composed almost entirely of alumina, saturated with carbonic acid.

Lactation is the process of secreting or supplying milk, or of nursing; and *Lactic Acid* is an acid obtained from milk, said by Raspail to be nothing more than an albuminous acetate; its salts are termed *Lactates*, and it is said by Berzelius to be found both in the blood and urine. *Lactuca* is the name of a genus of plants which yield a white milky looking juice, as do the Lettuce and the Poppy. *Lactucarium* is the name given by Duncan to the inspissated juices of the former plants, and infantile *aphtha* was formerly called *Lactamina*, from the impression that it was caused by a vitiated condition of the milk suckled by the child, and lastly, a *Lactometer* is an instrument for testing the purity of *Milk* (which see).

LACERATION. (Latin *lacero* to tear). A rent; the tearing of any part; the term *lacerated* is applied to two foramina at the base of the cranium, from their rugged or torn appearance. A lacerated wound is always more difficult to heal than a clean cut; and requires more careful treatment. See *Wounds*.

LACRYMA. (Latin for a tear; plural *lacrymæ* tears.) The fluid which is secreted by the lacrymal glands, which moistens the surface of the eye. The *Puncta Lacrymalia* is the name given to the external commencements of the two small tubes called the *Lacrymal Canals* or *Ducts*, which go from the internal angle of the eye, and terminate in the *Lacrymal Sac*, an oval bag about the size of a small horse bean. The *Lacus Lacrymaria* consists of a small space in the inner angle of the eye between the two lids, towards which the tears flow. The *Lacrymal bones* are the two bones of the face which support the lacrymal duct, veins, &c. See *Eye*, *Tears*.

LACTICA. The Arabian name for that kind of fever which the Greeks termed *Typhos* or *Typhoidis*. See *Fever*, *Typhus*.

LACTUCA, or LACTUCARIA. This substance, called *Thridace* by the French, is the white juice of the garden Lettuce, which exudes from the stalks when they are cut, and is allowed to dry spontaneously; it is narcotic, although less powerfully so than opium, and does not confine the bowels as that gum is apt to do. It is recommended in phthisis and catarrh; the dose is from 1

to 4 grains; it is also sometimes used externally as an opiate. See *Lettuce*.

LACUNÆ (Latin, plural of *lacuna*, a little cavity). The excretory ducts of the urethra, vagina, &c.

LAGOPHTALMIA OR LAGOPHTALMOS (Greek, *lagos* a hare, and *ophthalmos* the eye). A term applied to a disease in which the eye cannot be completely shut, on account of a shortening of the upper lid. See *Eye*.

LAGOSTOMA (Greek *lagos*, a hare, and *otoma*, the mouth); a term applied to *Hare lip*, (which see.)

LALO. The native name for a favourite article of food in Africa; it is made of the dried and pulverised leaves of the Baobab Tree. See *Adansonia*.

LALLATIO (Latin *lallo* to sing, *lullaby*). This is a name given by the Romans to that variety of psellismus, sometimes known as lullaby speech; in which the letter L is rendered unduly liquid, or is substituted for an R, as when parable is pronounced pallable. See *Psellismus*.

LAMB. This kind of meat, although often recommended for invalids, because tender and easy of digestion, is not in reality so good for them as mutton; not possessing the nutritive properties of the more mature flesh.

LAMBDA CISMUS. The Greek designation, derived from the letter *Lambda*, for that affection of speech which consists in a vicious pronunciation of the letter L. See *Iotacismus*, *Lallatio*, *Speech*.

LAMBOIDAL (from the Greek letter L, lambda, and *eidos* likeness.) The name of a suture of the *Skull*, (which see.)

LAMELLA (Latin *lamina*, a scale or plate) applied to the gills of a mushroom, and other parts both of animals and vegetables which have that peculiar structure called *Lamellated*. We also speak of the foliated structure of the bones and other organs as *lamina*, such as the *L. spiralis*, the plate which spirally encircles the modiolus of the *Ear*, (which see.)

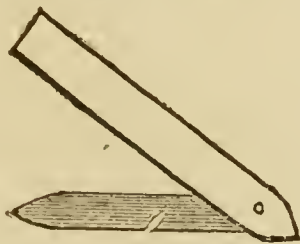
LAMENESS. This defective action of one or both legs may arise from a variety of causes, among which may be named *Rheumatic affections* of the joints or muscles, accompanied by *Inflammation*, *Scrofula* in the hip knee or ankle, *Dislocations* of the joints or *Fractures* of the bones, *Debility*, *Paralysis*, or *Natural deformity*. See all of these heads.

LAMPIC ACID. An acid obtained by Sir H. Davy from the combustion of ether. It is merely acetic acid with some etherous matter; its salts are called *Lampates*.

LANA PHILOSOPHICA, (Latin for Philosophical Wool). The snowy flakes of white oxide which arise and float in the air from the combustion of zinc, sometimes called Flowers of Zinc (which see.)

LANCET) *Lancette* diminutive of the Latin *lancea* a spear.) An instrument used for bleeding, opening tumours, &c. So familiar to most persons must be the shape and appearance of this useful instrument, that we need scarcely trouble our readers with a description of it: to the medical man it is an indispensable pocket companion, having often to be used on sudden emergencies, in which its immediate application is of vital importance; to the non-professional mind it has associations of sickness and suffering which render it an object of fear and dread; nevertheless, it should have a place in every family medicine chest, nothing being so handy for cutting the skin to extract a thorn, opening a watery bladder arising from a burn or other cause, or a slight abscess to allow the matter to escape; and with the aid of its sharp-pointed blade such simple operations as these can be easily performed by the careful nurse or mother, who should accustom herself to the use of it, that she may be ready to act with boldness and skill when called on to do so.

We have, already under the head of *Bleeding*, given some simple directions for the use of the Lancet, which should always be kept perfectly sharp and bright; especial care being taken to clean it after it has been dipped in vaccine or other virus, or brought into contact with matter of any kind. In addition to the directions already given, under the head above referred to, we may here observe that the proper position of the Lancet, when used, is about the same as that in the annexed diagram, or perhaps,



generally speaking, with the handle and blade more nearly at right angles, although not quite so; the blade should always be grasped firmly between the thumb and forefinger, as represented at page 101, vol. 1; at least a short distance from the point—half an inch will in most cases be sufficient, certainly for simple domestic operations. Good Lancets can be purchased at about 2s. 6d. each, in tortoiseshell handles; inoculating Lancets, which have grooved blades, are

somewhat dearer, so are gum Lancets, of which a cut is given at page 39, of the present volume. Lancet cases may be had at any price, from 6d. up to half-a-guinea or more, according to the material and finish; the plain leather are as serviceable as any for the medicine chest; for the pocket, wood or silver are best.

LAND-SCURVY. An eruptive disease presenting circular spots, stripes and patches, scattered over the arms, thighs, and trunk. Bateman calls it *Purpura hæmorrhagica* from its being occasionally attended by hæmorrhage from the mouth, nostrils or viscera. German medical writers term it *Morbus Muculosus Werthofii*. See *Skin Diseases*.

LANGUOR is generally indicative of debility which arises from disease; it may be either true or false, and, in either case, may be referred to *Weakness* (which see).

LAPIDELIUM. The name of an instrument shaped like a spoon, formerly used to take stones out of the bladder.

LAPILLUS (dim. of *Lapis*, a stone). A little stone; hence we have *Lapilli cancerorum*, Crabs' Stones, or as they are often called *Crabs' Eyes* (which see), also *Cancer*.

LAPIS (Latin for a stone, plural *lapides*). A term applied to several remedial agents native or prepared; thus we have *Lapis bezoar*, a concretion found in the stomach of certain animals, such as gazelles and antelopes; the oriental, or eastern, was formerly considered of great value, and fetched a high price; the occidental, or western, was always much cheaper, because more plentiful and generally substituted for the dearer kind. There was also a factitious *Lapis bezoar*, said to have been made of Bole Armenian and dried Blood, equal parts, mixed up with Mucilage of Gum Acacia, and then dried to look like the pure article. It is conjectured that the name Bezoar comes from the Persian *Pād zahr*, expeller of poisons; as from early times, and particularly in the East, these animal concretions were regarded as possessing great medical virtues, and as being antidotes against poison; their rarity, and their supposed virtues have given them so high a value, that they have sometimes been sold at ten times their weight in gold. The greater number of Bezoars were obtained from the ruminating animals; they are undoubtedly the result of morbid action, and consist chiefly of Phosphate of Lime. *Lapis calaminaris* (Latin *calamus*, a reed); this is an impure Carbonate of Zinc, called Calamine, because it was formerly supposed to be manufactured of a kind of reed (see *Zinc*).

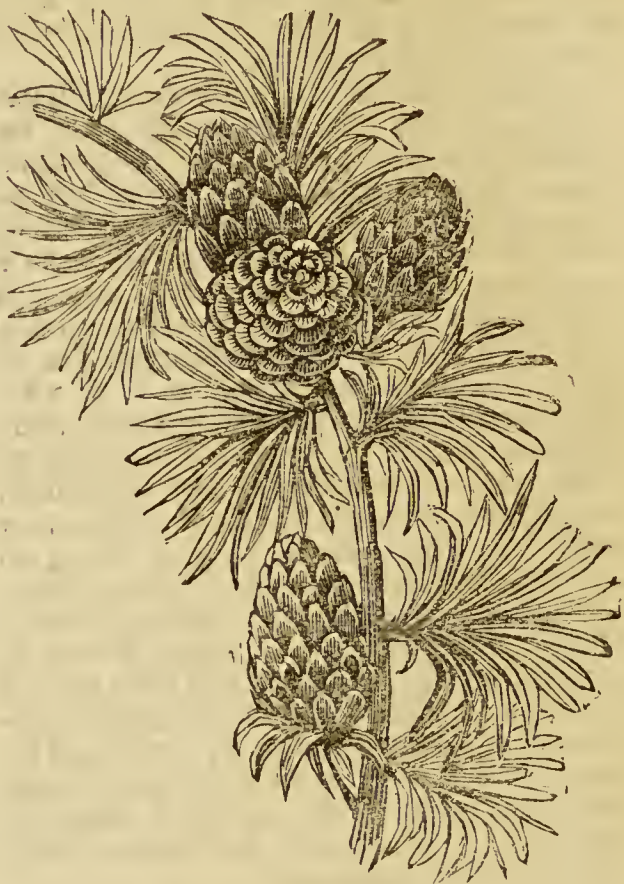
Lapis calcareus (Latin for limestone); this consists of Carbonic Acid and Lime, with Argil, Silex, Magnesia, and Oxide of Iron; it is used to form Lime for pharmaceutical purposes (see *Lime*). *L. contrayerva*; this is the *Pulvis Contrayerva Compositus* of the old Pharmacopœias (see *Contrayerva*). *L. dentalis*; the outer portion of the tooth, called by Gray, Tooth-shell, by others *Dentalium* or *Dentalis* (see *Teeth*). *L. divinus*; the name given by Beer to a composition of Subacetate of Copper, Nitrate of Potash, and Alum melted together in equal proportions for an eye lotion; it was sometimes called *L. ophthalmicus*. *L. hæmatitis*; an iron ore sometimes used to stop bleeding at the nose (see *Bloodstone*). *L. infernalis*; an old name for the *Potassæ cum calce*, or caustic Potash (which see). *L. manati*; Manate stone, the tooth of the sea-cow, used in the manufacture of artificial teeth; there is a spurious kind very similar in weight and hardness. *L. medicamentosus*; a preparation of Alum, Litharge, Bole Armenia, Coleothur, Vitriol, and Vinegar, boiled together, formerly held in great repute, but now gone out of use. *L. prunellæ*; this is the *Sal Prunellæ*, or sore throat salt, a composition of Nitre and Sulphur, melted together and pressed into moulds; it is found serviceable to suck in throat affections; it is now generally met with in the shape of small round balls, or flat cakes, and is, perhaps, the most agreeable way of taking pure Nitrate of Potash, than which it is little else. *L. pumex*, Pumice stone; a light spongy kind of stone, the result of volcanic action, which swims upon water, and is used, when finely powdered and levigated, as an ingredient in *Tooth-powder* (which see).

LAPSANA COMMUNIS. A native plant, formerly used for soreness of the papilla or nipples; it is mentioned by some old medical writers, but we have failed, from the slight allusion made to it, to identify the plant; it does not appear to be employed medicinally in this country now.

LAQUEUS GURTURIS (Latin for a noose of the throat.) Applied to a malignant inflammation of the tonsils, which causes a sensation of suffocation, as if the passage were constricted by a noose.

LARCH. The *Larix Europæa* of botanists; a species of pine, found in most of the mountainous districts of Europe: its bark yields a resinous juice, from which we obtain the substance called *Venice Turpentine*; it also secretes a kind of glue, called *Oreburg Gum*, and in the spring the

buds are said to be covered with a resin analogous to the much-prized Balm of Mecca. In some parts an exudation ap-



pears on the leaves of the tree, which concretes into what is called the *Manna of Briançon*.

LARD. This is the *Adeps suillus*, or fat of the hog, much used in culinary operations, as well as employed as the basis for various kinds of ointments and plaisters. See *Adeps*.

LARYNGISMUS, commonly called Spasmodic Croup, from its resemblance to that disease, is a sense of suffocation in the Larynx; it may arise from inflammation, or some other cause, peculiarly affecting the vocal organ.

LARYNGITIS is the scientific term for inflammation of the Larynx; it affects more especially the mucous membrane which covers the glottis and epiglottis, and, although sometimes limited to the Larynx itself, yet frequently extends to the tonsils, fauces, and upper part of the throat. It is usually attended with the common febrile symptoms, in conjunction with restlessness and anxiety, a hard pulse, and frequently a harsh cough also, and difficulty of breathing and swallowing; the former is peculiar, the inspiration being attended with a choking kind of noise, and a protracted wheezing, as if the air were being drawn through a dry reed; there is considerable pain at the hard projecting part of the throat, which is increased

by pressure; sometimes there is hoarseness and loss of voice, the patient speaking only in a whisper, or being unable to do more than move the lips; then, as the disease proceeds, the countenance becomes livid and ghastly; the eyes protrude, and are probably blood-shot; there is gasping and signs for more air: finally, drowsiness, delirium, and death by strangulation, unless relief is afforded. These severe symptoms are owing to the thickening and swelling of the mucous membranes, and effusion of serum into the surrounding parts, narrowing, and finally closing up the air passages. The great American statesman, Washington, died of this disease, and several distinguished physicians have been its victims; but it must not be confounded with *Diphtheria*, which we have described under the head of *Herpes Malignum*.

The most natural mode of *treatment* is to apply, as early as possible, fomentations, as hot as they can be borne, to the throat, so as to produce redness of the skin; then draw blood, by cupping from the nape of the neck, and apply a blister to the upper part of the breast bone; administer a dose of Calomel, about 4 grains, with a $\frac{1}{4}$ of a grain of Opium; this is as far as domestic treatment can be safely carried, and so much as this should not be done without professional advice, if it can be obtained; but these cases are commonly urgent, and something should be attempted *at once*. In the more advanced stage of the disease common medicine has little effect, and the surgeon must resort to *laryngotomy*, that is the operation of making an opening into the Larynx, through which the patient may be enabled to breathe; and this operation is the only resource when suffocation is threatened by closure of the Larynx from any accidental cause, such as swallowing caustic acids, alkalis, or boiling water.

Chronic Inflammation of the Larynx will be likely to follow the acute form of the disease; in this we commonly have persistent hoarseness and loss of voice. The best *treatment* in this case is counter irritants applied to the throat: if these are ineffectual, three or four leeches, to the upper part, externally, twice a week, for a month or two; and a strong solution of Lunar Caustic, internally, by means of a camel hair brush; the bowels should be kept open, and the diet rather low. Sometimes the disease has a syphilitic origin, and in this case the treatment must be rather general than local; (see *Syphilis*).

LARYNX. Greek for the upper part of the Trachea, situated immediately under

the Os hyoides; or, more popularly speaking, at the upper part of the windpipe; it may be regarded as more especially the vocal organ, and therefore we shall devote a considerable space to an explanation to its anatomical construction. The Larynx then, is a short tube constructed in the middle something like an hour-glass; it is composed of cartilages, ligaments, muscles, vessels and nerves, and mucous membrane, which forms the lining. The cuts which we have caused to be engraved, to aid in the description of our subject, are as follows:—Fig. 1 represents a vertical section

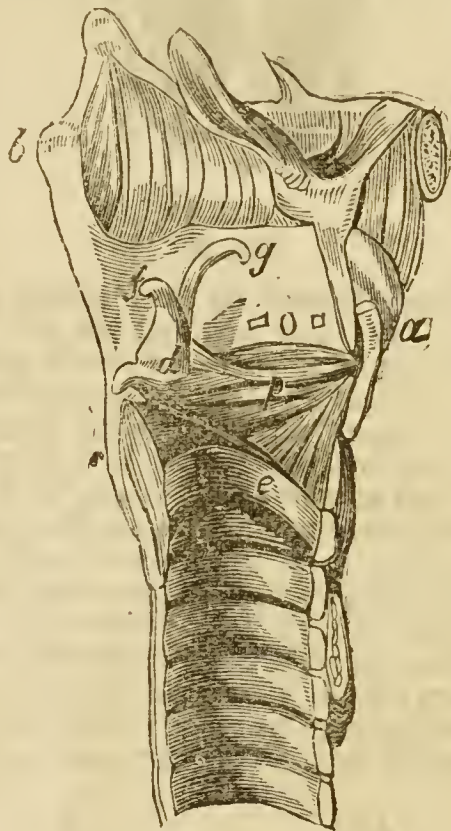


Fig. 1.

the Larynx showing its ligaments; 2, a posterior view of the same; 3, a side view, with one ala of the thyroid cartilage removed: these three are from Wilson. In fig. 4 we may suppose ourselves looking from above into the larynx, the mucous membrane being removed to show the ligaments, muscles, &c. We will take first the cartilages, as being the most easily disposed of; they are six in number, viz.—1, the *thyroid* cartilage, which is the largest in the Larynx. consists of two lateral portions, or *alæ* (fig. 1, *a*); these meet and form an angle in front, which projecting externally forms the protuberance known as “Adam’s Apple,” which is most obvious in the male, and after the age of puberty; at the back of each *alæ*, which is nearly square, are two horn-like formations, one projecting up and

the other down: these are called the *superior* and *inferior cornea* (fig. 1, *h* and *c*); the attachment of the epiglottis (*b*) takes place

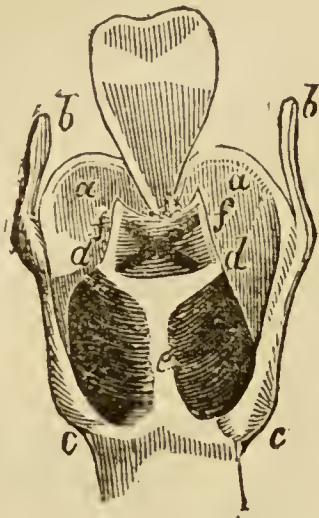


Fig. 2.

on the angle formed by the meeting of the two alæ (*h*); and here, too, on the inner side, are attached the vocal chords and the *thyro-arytenoid* and *thyro-epiglottideus* muscles: upon the two rounded surfaces of the *cricoid* cartilage, which is a ring broad behind but narrow in the front, lie the two *arytenoid cartilages*, which are of a triangular form (fig. 1, *d*), the apex of each above being prolonged by the two small fibrous cartilages, termed the *cornicula* (*f*). Attached to the middle of the external surface of the arytenoid (*g*) are the *cuneiform* cartilages, cylindrical in shape, being somewhat compressed in the middle; and lastly, we

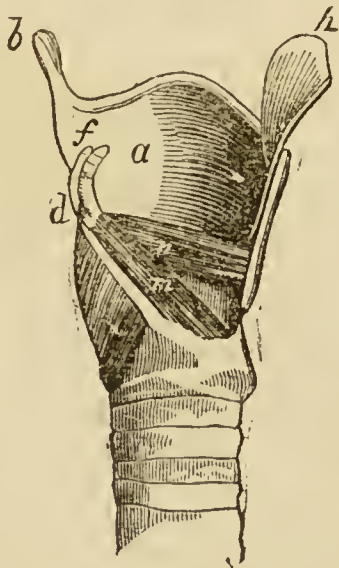


Fig. 3.

have the *epiglottis*, placed directly in front of the opening of the larynx, and closing it like a trap-door, when it is drawn beneath the tongue, in the act of swallowing.

The *Ligaments* of this curious and complicated organization are too numerous to be all particularly described; those, upon the arrangement of which the vocal power principally depends, belong to the arytenoid cartilage; they are eight in number, four of them being the *capsular* ligaments and *posterior* bands, whose office it is to protect the joints between the arytenoid and cricoid cartilages; there are also a pair of *superior thyro-arytenoid ligaments* (or false vocal cords) which consist of two thin bands of elastic tissue, with front and back attachments, the first being to the internal angle of the thyroid cartilage, and the last to the inner and anterior edge of each arytenoid cartilage (fig. 1, *o*.) There is, besides, a pair of *inferior thyro-arytenoid ligaments* (or true vocal cords) which are thicker than the superior pair, although, like them, composed of elastic tissue; the attachment of each in front is to the angle

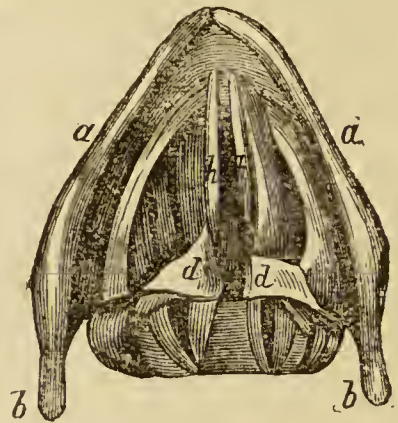


Fig. 4.

of the thyroid cartilage, and behind to the anterior angle of the base of the arytenoid. The space between the two ligaments assumes on each side the form of a pouch, which is called the *ventricle* of the Larynx, and the slit between the two true vocal cords is the *glottis* or *rima glottidis*. We get a good view of these parts in fig 4, where *a a* is the thyroid cartilage with its superior cornua (*b b*); while *d d* indicates the arytenoid cartilages, and *pp* the vocal chords with the rima glottidis between them. In fig. 1 we see these ligaments of the Larynx which run to the thyroid cartilage, with the *os hyoides*, or bone of the tongue (*i*); these are also those which connect it with the cricoid, and others, which we need not mention.

Of *Muscles* of the Larynx there are eight; five being concerned in the movements of that organ in the utterance of vocal sounds, and three in those of the epiglottis; these muscles are named from their attachments: as 1st, the *crico-thyroideus*, which is stretched

between the anterior surface of the cricoid cartilage, and the lower and inner border of the ala of the thyroid; 2nd, the *crico-arytenoideus posticus*, which is attached to the posterior surface of the cricoid cartilage, and to the outer angle of the base of the arytenoid (fig. 2 *l*); 3rd, the *crico-arytenoideus lateralis*, which is attached to the upper border of the side of the cricoid cartilage, and to the outer angle of the base of the arytenoid (fig. 3 *m*); 4th, *thyro-arytenoideus*, which is attached to the angle of the thyroid cartilage, and to the base and outer surface of the arytenoid (fig. 3 *n*); 5th, the *arytenoideus*, which occupies the space between and behind the arytenoid cartilages, consisting of transverse and oblique fibres (fig. 2 *k*). These are the five which belong especially to the Larynx; those of the epiglottis consist of scattered fibres, which being attached to it have the power of raising or depressing it, but have no action on the vocal organs. Bishop, than whom we could not quote a better authority, states that the crico-thyroidal muscles are tensors of the vocal chords, and regulate their tension, position, and vibrating length.

The *Arteries* of the Larynx are derived from the superior and inferior branches of the external carotid. The *Nerves* are the superior and recurrent laryngeal, both of which are branches of the pneumogastric nerve, and thus are derived from the brain itself, or that portion of it called the *medulla oblongata*.

All the parts here described are covered somewhat loosely with the mucous membranes, which, in the cuts, is removed to exhibit the peculiarities of structure. The upper aperture of the Larynx may be described as a triangular or heart-shaped opening, having the broadest part in front, where it is bounded by the arytenoideus muscle; on either side of the opening lies a fold of mucous membrane, which stretches between the epiglottis and the arytenoid cartilage; at the back lies the epiglottis. The cavity of the Larynx has an oblong constriction, which divides it in two parts; this constriction is produced by the prominence of the vocal chords, above and below which the Larynx spreads out in a triangular shape; the circumference of the cylinder corresponding with the ring of the cricoid cartilage. The glottis is in the form of an isosceles triangle; it is bounded on the sides by the vocal chords, and behind by the arytenoideus muscle; in the male it is somewhat longer than the female, measuring about $\frac{3}{4}$ ths of an inch. (For more particulars on this head, see *Throat, Voice*.)

The *Glands* of the Larynx are those of the epiglottis, the arytenoid, and thyroid glands.

LASERPITIUM. An old name for the herb Masterwort, *Astrantia Major*, the gum of which was called *laser*. Pliny applied the term to assafoetida, which the ancients used as a condiment; by some, benzoin is so termed.

LATERAL (Latin *latus* or *laterus*, the side). Hence the term is applied to an operation in cutting for the stone. See *Lithotomy*.

LATERITIOUS (Latin *latis*, a brick). A term applied to the red sediment deposited from the urine in some stages of fever; it has been said to constitute a peculiar acid, which Prout has called *Rosacic*; its essential constituent is Lithate of Ammonia, and sometimes of Soda, and it owes its colour partly to the colouring matters of the urine, and partly to the purpurates of the same bases.

LATIBULUM (Latin *lateo*, to hide). The fomes or hidden matter of infectious diseases. See *Infection*.

LATISSIMUS DORSI (Latin superlative of *latus* broad, and *dorsum* the back). A flat muscle situated in the back, and side of the lower part of the Trunk. It moves the arm backwards and downwards; or brings the body forward when the hand is fixed.

LAUDANUM. The common name for Tincture of Opium, and the form in which that drug is most frequently administered as a medicine: 19 minims of the Tincture yields 1 grain of the Gum, which, however, contains some impurities, it is therefore safest to reckon its strength as 1 in 20; it is narcotic, sedative, and being made with spirit, is also, to a certain extent, stimulant and antispasmodic. For relieving pain, wherever situated, to diminish irritation, and to procure sleep, it is one of the best medicines we possess: in cases of spasmodic cold, or simple spasm, it is best given in Brandy and Water, or with Sal Volatile or Ether; in fever it should be combined with some saline, until moisture begins to appear on the skin: in diarrhoea and dysentery, its combination should be with Chalk and aromatics, or with an acid, as the diluted Sulphuric, or with Starch as a clyster. In cases of local pains and spasms it may be mixed with Camphorated or some other stimulant liniment, and rubbed into the parts affected. For internal administration, the dose is from 10 to 25 minims, which may be increased to 50 minims, in violent spasm. (See *Opium*.)

The Liquid Laudanum of Sydenham is the original of the Wine of Opium, than

which it is twice as strong, 1 fluid drachm containing 10 grains of the drug.

LAUGHTER is generally considered conducive to health—hence the phrase, “Laugh and grow fat.” Not always, however, is it so. Sometimes it is symptomatic of a diseased condition of the brain, or of hysteria; and when it arises from an excited condition of the nervous system, as in the case of natural laughter, it may, if excessive and prolonged, occasion serious consequences, passing into *Convulsions* (which see). Hence the danger of tickling children or grown persons to make them laugh immoderately. As an indication of mirth and cheerfulness of spirit, it is good and pleasant to see; and there is something very exhilarating in the sound of a clear ringing laugh: but for the senseless laughter, which bespeaks the vacant mind, it is healthful neither for soul nor body; but is like that which Solomon describes as the crackling of thorns under a pot. See *Mirth*.

LAURINEÆ. The scientific name of the Cinnamon tribe of dicotyledonous plant, of which the genus *Laurus* contains many familiar examples, such as the *Cinnamon*, *Cassia*, *Camphor*, and *Sassafras* (all of which see). The *Laurus Nobilis*, or Bay Tree, is the typical or characteristic plant of the genus; its young shoots and leaves contain a considerable proportion of Prussic or Hydrocyanic Acid, which imparts the peculiar flavour so highly valued in custards and confectionery. Cases of poisoning have occurred from the use of the distilled Laurel Water, which, however, is not always prepared from the leaves of this tree, but often from those of a species of Cherry, the *Prunus Lauro-cerasus* of botanists, belonging to the order *Amygdalæ*. Its various preparations, such as Infusion, Oil, and Water, are used internally as sedative, in cases of gastric neuralgia and dysentery; they are also applied externally to cancerous sores, burns, and other painful affections; they are scarcely to be recommended in domestic practice for internal administration on account of their poisonous properties. The common Laurel leaves are sometimes scalded, and used as a sedative poultice; they should be bruised and soaked for some minutes in the boiling water, and applied in a considerable mass, so as to retain the heat for a considerable time.

LAUREL ROSE. The *Nereum Oleander* of botanists; a poisonous plant, whose dried leaves are powerfully emetic. This is one of our most beautiful window plants, but it should be borne in mind that there is death in its very perfume; its emanations are so

subtle that serious mischief has resulted from inhaling them. Oleander, or Rose Bay, are the names by which it is commonly



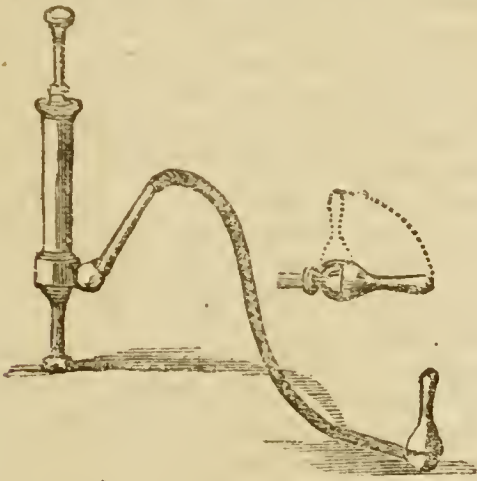
known. Oil in which the leaves are infused is sometimes used as a liniment in cutaneous diseases.

LAURINE. An alkaloid discovered in laurel berries, and also in the kernels of peaches; it is highly poisonous, and has not, that we are aware of, been used medicinally.

LAVENDER (scientific name *Lavendula Vera*). A plant of the natural order *Labiata*, well known to most persons. Its flowers contain a volatile oil, which is obtained by distilling. There is another species, the French Lavender, *L. Spica*, which yields an inferior kind of oil. The oil of Lavender is warm, aromatic, and carminative. It is useful as a stimulant in cases of debility, and as a corrective adjunct to other medicines. The dose of the Oil is from 5 to 10 minims; of the Spirit and the Compound Tincture, $\frac{1}{2}$ a drachm to 2 drachms. This latter preparation is commonly known as Lavender Drops; it is taken as a cordial stomachic, to relieve flatulency, and as a remedy for depression of spirits. Lavender Water, besides being used as a perfume, is also sometimes put into mixtures as an aromatic adjunct. The Oil of Lavender, with equal quantities of Lard and Butter of Cocoa, makes a good application to stimulate the growth of the hair.

LAVEMENT (Latin *lavo*, to wash). This is the term sometimes used for a clyster, ene-

ma, or injection, under which heads we have described the preparations generally, used for such purposes, and also the mechanical appliances; (see *Instruments and Syringe*). We give here a cut of one



of the commonest forms of the Lavement apparatus; it is of brass with revolving side branch and rectum pipes, requiring no screw to connect the parts, and having an extra pipe for children, with tube and shield for uterine injections. It may be obtained of any surgical instrument maker.

LAVÉR. The name of a species of fucus, or sea-weed, sometimes eaten as a delicacy. See *Fucus*, *Ulva*.

LAVIPEDIUM (Latin *lavo*, to wash, *pes* the feet). A bath for the feet. See *Baths*.

LAWSONIA INERMIS. An Egyptian plant of the natural order *Salicaria*, chiefly used by the natives as a dye. From it is pre-



pared the henna used to stain the nails, and sometimes the teeth, of the ladies of the harem, &c.

LAXATIVES (Latin *laxo*, to loosen). Mild *Purgatives* (which see); also *Aperients* and *Cathartics*.

LAXATOR TYMPANI (Latin *laxo*). A muscle of the tympanum attached to the handle of the malleus. See *Ear*.

LAZARETTO (Italian *lazzaretto*, from *lazzaro*, a leper). A pest house, or establishment for facilitating the performance of quarantine, and particularly the purification of goods arriving from places infected with the plague, fever, or other contagious or infectious diseases.

LEAD. This, as our readers well know, is one of the softest and most useful of metals, extensively applied to artistic and scientific purposes, but it is not of such application that we are here to speak, except in so far as relates to domestic economy and the science of health. *Cerussa*, or *Plumbum*, is the Latin name of the metal; the ancients called it *Plumbum nigrum* (Black Lead), to distinguish it from Tin, which they called *P. album* (White Lead). The Black Lead of our day is *Plumbago*, which is a carburet of Lead, chiefly used for making pencils; the White Lead is produced in the form of flakes, by the action of the vapour of vinegar on the metal; the chief use of this is in painting; when dissolved in acetic acid and crystallized, it is termed Sugar of Lead; of this we shall have to speak presently. Another common preparation is *Minium*, or Red Lead, employed chiefly as a pigment.

Preparations of Lead are used medicinally as astringents, both externally and internally, and are also given as antispasmodics and sedatives; to check hæmorrhages and other forms of bleeding they are administered, as well as in fluxes of the bowels and urino-genital organs; and their application in the form of lotions, ointments, and plaisters, to inflamed surfaces, is commonly of great service. It should be borne in mind that all these preparations are very poisonous, and therefore unfit for internal use, except under medical advice; the chief of these are employed as under:—

Acetate of Lead (*Plumbi acetat*) is the form generally adopted for internal use; it is given in hæmatemesis, diarrhœa, and dysentery, in doses of from 3 to 5 grains; it also forms astringent lotions, injections, and ointments.

Diacetate of Lead (*P. diacetat*) is the Sugar of Lead before spoken of; in strong solution it constitutes Goulard's Extract;

in weaker, Goulard Water : cooling and astringent lotions for inflamed parts, collyria for various ophthalmic affections, and injections for gonorrhœa and leucorrhœa are made from these.

Carbonate of Lead (*P. carbonas*), generally known as White Lead. The powder is mixed with lard, to form a cooling ointment, and is used dry as an absorbent and astringent.

Chloride of Lead (*P. chloridum*), has been used as an astringent wash for cancerous ulcers ; it is only applied locally.

Iodide of Lead (*P. iodidum*). Sometimes given as an alterative and resolvent in scrofulous affections, in doses of from $\frac{1}{2}$ a grain to 3 grains ; is also applied in the form of ointment to ulcers and tumours of an indolent and strumous character.

Nitrate of Lead (*P. nitras*), resembles the acetate in its character ; it is the basis of Ledoyen's Disinfecting Fluid.

Nitro-sacchate of Lead (*P. nitro-saccharus*). A salt recommended by Dr. Hoskins, of Jersey, as a solvent for urinary calculus, to be used in solution as an injection into the bladder.

Semi-vitrified Protoxide of Lead (*P. oxidum semi-vitreum*), commonly called Litharge, not used internally, but for making plaisters, which are applied to tumours, inflamed and diseased parts generally, as a resolvent and protector. This oxide is contained in many cerates, and other local applications.

Tannate of Lead (*P. tannas*), makes a good application for sloughing bed-sores, chapped nipples, &c., in the form of ointment. In the Pharmacopœias of London, Edinburgh, and Dublin, we find various formulæ, of which some preparation of Lead forms the chief active ingredients, but only one for internal administration—this is the Opiate Lead Pill, useful in Diarrhœa, dysentery, and inward bleeding. Each pill should contain 3 grains of Acetate of Lead, and $\frac{1}{2}$ a grain of Opium.

The large employment of Lead in the manufacture of cisterns and water-pipes, has, no doubt, been productive of much serious mischief ; of that which results to those who are obliged, frequently, to inhale Lead fumes and handle the metal, we have already spoken, under the head of *Colic* (which see).

We meet with this metal in so many forms and combinations, that it is extremely difficult to avoid imbibing it into the system. It enters into the glaze of earthenware and other vessels, and may be partly dissolved acid or fatty matters, especially when

new. With the yellow chromate, or the white carbonate our confectionery is often coloured ; sour wine has been sweetened with the oxides, or impregnated with the metal left in the bottles in the process of cleansing with shot ; rum and cider are apt to contract lead in the manufacture ; and a room newly painted with Lead colours will give out, in the drying, poisonous vapours. Those who play with enamelled cards should keep them out of the way of little children, or their propensity for sucking everything they lay hold of may lead to serious consequences ; and those who use hair-dyes, or leaden combs, must not be surprised if they have an attack of painter's colic, the result of small doses of lead taken into the system. When the dose is large, there will be almost immediately spasmodic pains, followed by vomiting and extreme depression. In such a case, Vinegar should be the first remedy administered, to be followed up with $\frac{1}{2}$ a drachm of Sulphate of Zinc, in warm water, or Sulphate of Magnesia, in 2-drachm doses. The acid converts the Lead into one of its least poisonous salts, which is decomposed by either of the sulphates. Lead-Poison in the system, if it has accumulated there, is indicated by a bluish line along the gums, at their junction with the teeth.

LEAKE'S PILLS OF HEALTH, or *Pilule Salutaria*. A mercurial preparation, once in high repute for the cure of syphilis ; it is very similar in composition to *Plummer's Pills*.

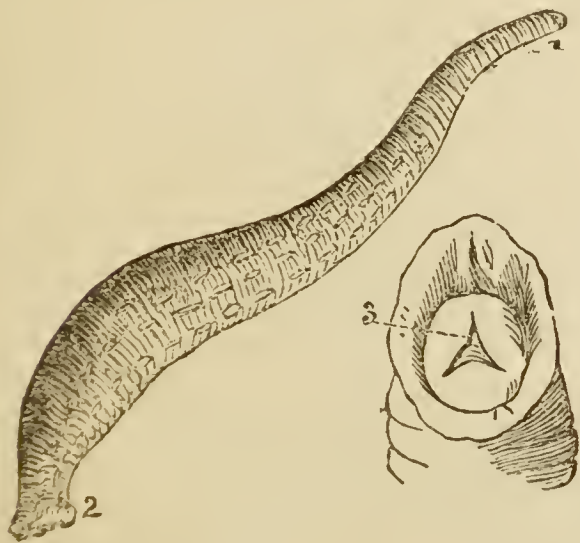
LEAMINGTON WATERS are especially recommended for derangements of the stomach, in which there are no inflammatory complications ; also for obstructions of the liver, chronic gout, with constipation of the bowels, acne, and other eruptive diseases. The composition of these waters, according to a resident physician, is this :—Muriate of Soda, 40·700 grs. ; Sulphate of Soda, 40·398 ; Muriate of Lime, 20·561 ; Muriate of Magnesia, 3·266. The gases of which they are composed are Carbonic Acid, Azote, and Oxygen, in the proportion of 3102 cubic inches of the first, 0·573 of the second, and 0·075 of the last. "The climate of Leamington," says the above authority, "is more mild and equal than the greater part of the inland watering-places ; it is neither exposed to sudden gusts of wind, nor to the frequent rains which a mountainous neighbourhood so frequently attract."

LEAPING AGUE. The name of a disease occurring in some parts of Scotland, the chief characteristic of which is a morbid desire to leap and run ; it is intermittent, and therefore called ague, but ought probably

to be considered as a kind of St. Vitas' Dance.

LEBARARGUE'S SOLUTION. A disinfecting fluid, consisting of Soda and Chlorine; it is analogous to the well-known bleaching liquid, which is a solution of Chloride of Lime. See *Disinfectants*.

LEECH (in Latin *hirudo*, plural *hirudines*). The Leeches are a family of annulose, or red-blooded worms, placed by Cuvier in the third order of *Annelida*, and called *Hirudinidæ*; several species are known to us, but two only are recognised as fit for medical purposes in this country; they are respectively known as the "Brown" or "Spotted," and the "Green Leech," the former, which is generally the smallest, being considered the best. The Horse Leech, which is a native of our ponds and ditches, is sometimes, but not often, used; it does not bite well, and makes too large a wound when it does; (for a cut of this, see vol. 1, p. 86, under head *Bdella*). We obtain most of our Leeches from Hamburgh, where there are merchants who collect them from different parts of the continent; many of them from Sweden, Poland, and Hungary. In France, leech-breeding in tanks, and other artificial reservoirs, has lately been much attended to; it is found that they are five years before they come to a state of maturity, and until they do this they are quite unfit for medical purposes. The general appearance of this useful animal must be familiar to our readers, but few of them, perhaps, are aware of those peculiarities of structure which enable it to perform the office of blood-sucker, on which its chief utility depends; by the aid of a diagram we will endeavour to explain this:—



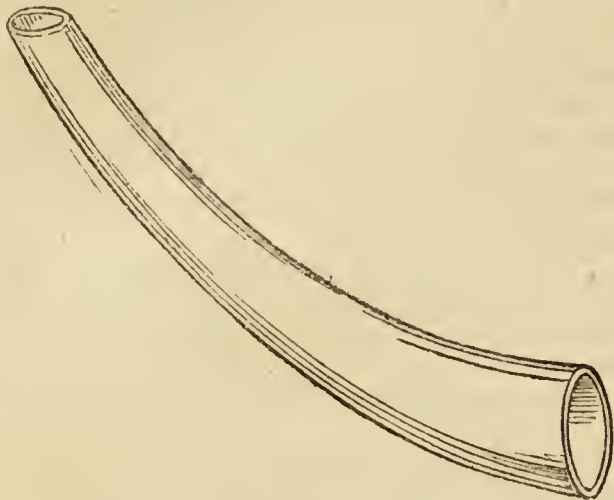
Let it be understood that the narrowest end (1) is the sucking mouth, the broader end being the tail (2); this is simply provided

with a sucker, by which it holds fast to any object. The small cut gives us a front view of the mouth opened, exhibiting the three mandibles or jaws (3), the edges of which are set with minute teeth; by means of these the animal perforates the skin after it has been drawn up by the mouth: by the mandibles it seems likely that the edges of the wound are kept apart, and they form a kind of tube through which the blood passes until the animal is gorged, when it looses its hold and drops off.

Upon an average, Leeches are said to take about one drachm of blood each, which, with what flows after, may be increased to $\frac{1}{2}$ an ounce; this may be taken as the basis of calculation required as to the quantity to be abstracted.

It is, however, impossible to regulate the flow very nicely by this method of phlebotomy; therefore, in all cases where bleeding or cupping can be at all conveniently performed, one or other of these means should be resorted to: when Leeches are applied, it should be over a bone, against which pressure can be made, if necessary, to stop the bleeding, and never on a soft part, such as the neck or abdomen; especially with children, who have sometimes died from loss of blood, the flow of which it has been found impossible to stop, in consequence of there being no basis for the application of pressure. The best and simplest way of applying Leeches, is to confine them to the desired spot within an inverted wine-glass, through the sides of which it can be seen when they have bitten; a large pill-box, which is sometimes used, has not this advantage, and must be frequently lifted, by which the animals are disturbed, and bites sometimes prevented. Putting them on individually, holding the Leech by the larger end in a towel or napkin, is a very tedious process, and letting them crawl at will over the surface, a very uncertain one as to the exact spot on which they will fasten. If it is to such a part as the interior of the mouth from which the blood is to be extracted, a Leech-glass, shaped like that in the accompanying cut, must be used in this manner:—Put the Leech, head-foremost, into the broader end of the glass; it will naturally slide to the smaller end, which must be applied to the gum or other diseased spot, so that the creature cannot escape, and if at all inclined to bite will soon do so; the glass must be kept in its position until the sucking is over, and the hold of the Leech is loosened, when it can be removed without any unpleasant contact

with the mouth. This mode can also be adopted with the vagina, or other part near the surface of the body whence it is desirable to abstract blood.

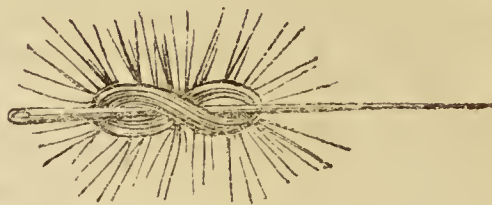


Leeches are unable to bite where the skin is very hard and tough, and they will seldom fix where there are any hairs; if the surface on which they rest is not smooth and soft, they will often drop off before they have sucked their fill, and this is too likely to occur if they are suffered to depend from the point of suction. When they come off, it is usually desirable to encourage the flow of blood, and to this end a hot bread or bran poultice should be applied, or if this is objectionable on account of the moisture, several folds of linen made quite hot and placed over the bites will do; this should be replaced with dry folds when they become saturated with blood. In many cases, however, and especially with children, the difficulty is to stop the bleeding before it proves too exhausting; this may sometimes be accomplished by placing a pad of lint over the bite, and keeping a firm pressure on it with the forefinger for some minutes, that is, supposing there is bone beneath to press upon. When the flow seems arrested, it is best not to remove the pad at once, but keep it in its place with strips of adhesive plaister. If the simple lint does not answer, try a pad soaked in a strong solution of Alum, and if this fails, apply a pointed piece of Lunar Caustic to the bite. As a last resource, take a sewing needle, pass it through the wound from side to side, and then twist cotton or thread tightly round it in the letter S form, as represented above.

It has sometimes been found needful to apply actual cautery—a wire or skewer heated to a white heat. These are desperate expedients, but it is better to resort to them than let a child or weakly person

bled to death. Generally, pressure, firmly and judiciously applied, will be sufficient.

It should be borne in mind that leech-bites, after the bleeding has apparently



stopped, will sometimes burst out afresh; therefore children who have been leeches and put to bed ought to be carefully watched. It is best, if possible, to avoid applying Leeches to a child towards night on account of this danger.

In persons predisposed to inflammation, a leech-bite will sometimes assume an angry, erysipelatous appearance. Perhaps there will be considerable swelling and pain, but this is generally subdued by the application of Goulard Lotion.

Before applying a Leech it is best to let it crawl for a short time on a clean dry napkin or towel; and if after that there is any difficulty in getting it to fix, smear the part with a little milk and sugar mixed, and made rather warm. If, in consequence of cold, the creature appears sluggish and inactive, put it into water at a temperature of about 70°, with a couple of table-spoonsful of porter in it. Should it be desirable to detach the Leech before it has done sucking, do not pull it off forcibly, but sprinkle a few grains of salt on its head. The old practice of putting the creature when gorged into a plate of salt, is not a good one; the better plan is to immerse it in a solution, not very strong, of this substance, and when it has thrown up as much blood as it will; to “strip” it thoroughly, by holding the tail end firmly between the finger and thumb of the left hand and drawing it steadily between those of the right, nearly up to the head. This is a disagreeable process, but it is the most effectual for cleansing the animal, so that it may be preserved for future use. It should be put into clean fresh water, which, for the first three or four days, should be changed twice a day, afterwards every four or five days will do. The temperature of the water should not be lower than 50° Fah., and the place in which it is kept should be airy, and free from strong odours. The vessel, a wide-mouthed jar or bottle, about half-filled, with a little clean sand at the bottom; the top covered with a piece of muslin or gauze. Very pretty Leech aquariae are now sold at a moderate price. Of one of

these we give a cut ; it may be had of Mr. Potter, of Farringdon-street, London, whose stock of Leeches is the largest in London, and from whom every information as to quality, price, and mode of preserving these useful animals may be obtained.



Leeches which become inert, and assume a knotted appearance, should at once be removed, or they will affect the whole stock. According to Dr. Christison, Leeches that have been used may be rendered as fresh and active as ever, if a little White Sugar is dissolved in the water into which they are put for the first two or three days. Another plan which he recommends is to put the Leeches into a vessel, with half an inch of sand at the bottom, containing water, with two tea-spoonsful per quart of French White Wine, and to change the liquid daily till the fourth day, when pure water is to be substituted.

This authority further tells us that "The gorging of Leeches is a more common fraud than the substitution of spurious species. They are known by being less velvety in their coat, less flat when pressed, and by presenting a little tumour when squeezed between the fingers from the head to the tail. Leeches that have been used are often sold for unused, or 'virgin' Leeches. These are best known by putting them on a white cloth and dusting their fore-part with finely-powdered salt. If they have been used before, in thirty seconds a little blood will be emitted, but not a particle if the Leech be quite fresh."

To know which are the healthiest and most vigorous Leeches, take a number in the hand, and gently close it upon them ; select those which contract themselves into a tolerably firm ball, and reject those which are flabby and flaccid.

It has sometimes happened that a Leech applied to the inside of the mouth or nostrils,

has crawled out of reach, and got into the stomach, in such a case, a strong Solution of Salt should be swallowed, or injected into the bowels, to kill the animal.

Several artificial substitutes for Leeches have been invented, but none, we believe, which have fully answered the purpose ; one that did so would be extremely valuable, especially to emigrants. The most recent, and perhaps efficient, invention of the kind is Kidston's artificial Leech, which is well worthy of attention.

LEEK. As an article of diet, this is too heating and stimulating for most persons, and is likely to disagree with those of weak digestion : if taken at all, Leeks should be blanched like celery, and stewed ; the fresh juice is said to be powerfully diuretic, and has been recommended for dissolving calculi formed of earthy phosphates. The vapour of boiling water poured over these plants, is popularly considered a remedy for piles ; the mode of application is to cut up the Leeks, put them in a bed-pan or chamber utensil, pour on the hot water, and let the patient sit upon the vessel for a time. See *Allium*.

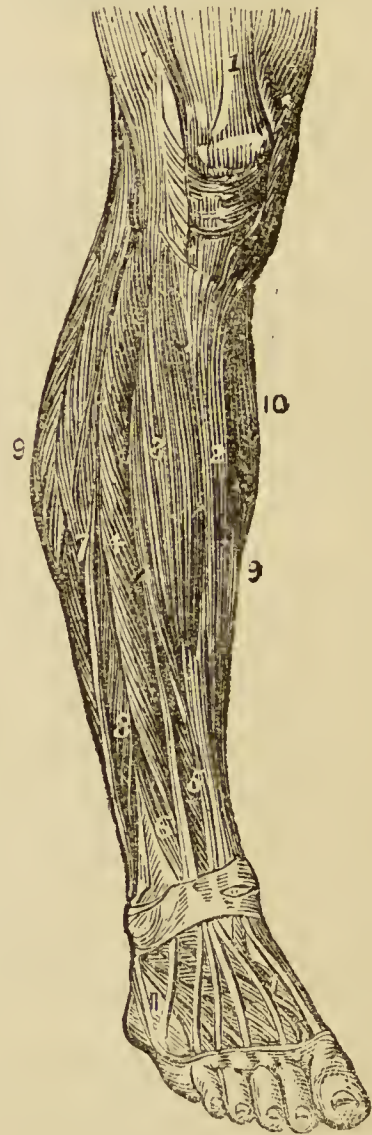
LEG. This term is very commonly applied to the whole of the lower limb, from the hip to the ankle, but properly it belongs to that portion only which lies between the knee and the ankle ; it is formed of two bones, the *tibia*, and the *fibula*, the upper broad portion of the former only forming part of the knee joint, but the lower ends of both being required in the formation of the ankle-joint. The following cut represents a front view of the bones of the right leg :— 1 is the shaft of the tibia ; 2 and 3 its inner and outer tuberosity ; 4, spinous process ; 5, tubercle ; 6, internal and sub-cutaneous surface of the shaft ; 7, lower extremity ; 8, internal malleolus ; 9, shaft of the fibula ; 10 and 11, its upper and lower extremities ; the latter showing the extension called the internal malleolus, similar to that of the opposite tibia, the sharp border between 1 and 6 being the crest of the latter bone. Fractures of these bones together or separately are of not unfrequent occurrence (see *Fractures*) ; and dislocations may take place at either extremity (see *Dislocations*). We have, however, here spoken only of the bony structure or skeleton of the Leg, which requires filling up with the muscular and other tissues, which go to make it one of the most shapely and useful limbs of the human body. In the next cut, like the last, from Wilson, will be seen the peculiar arrangement of the muscles by which its various movements are effected.

In this, which is the anterior aspect of the limb, we see the beautiful development of the calf, and arrangement of the superficial



muscles, which only can be here exhibited : —1 is termed by anatomists the *quadriceps extensor* which is inserted into the patella or knee cap ; it rests on the tendon of the rectus, and has the *vastus internus* and *externus* on either side of it ; 2 is the sub-cutaneous—that is underskin surface of the tibia ; 3 is the muscle called *tibialis anticus* ; 4 the *extensor longus digitorum* ; 5 the *extensor proprius pollicis*, the latter of which is inserted into the base of the last phalange of the great toe ; 6, 7, and 8 are the *peroneus tertius*, *longus*, and *brevis*, three muscles by which several important movements of the leg and foot are effected ; 9 9 are the borders of the *soleus* muscle ; 10, part of the inner swelling of the *gastrocnemius*, that thick muscular part of the leg commonly termed the calf ; 11 the *extensor brevis digitorum*, the tendon in front of which is that of *peroneus tertius*, while that behind it pertains to the *peroneus brevis*. These are some of the principal superficial muscles ; there are others which lie beneath them, and

some which occupy a front position in the Leg, to which we need not allude ; the general structure and arrangement being sufficiently shown by the above diagrams and explanations for all the necessary purposes of our work. We have already mentioned dislocations and fractures as among the injuries to which the Leg is subject ; its diseases are those common to most parts of the body (see *Foot*). One affection peculiar to the limb is what is termed White Leg—in scientific language *Phlegmatia dolens*, which attacks delicate women shortly after delivery ; it commences with pains in the lower parts of the abdomen ; this extends to the groin, and thence down the thighs, which gradually become tense and swollen, the skin assuming a smooth, shining appearance, with a tendency to pit on pressure ; this soon extends down the legs.



The constitutional symptoms are, white-coated tongue, quick weak pulse, great thirst, loss of appetite, and restlessness. Gradually the swelling of the limbs subsides, and there is a formation of matter in various parts,

with a copious discharge, which exhausts the strength of the patient.

Treatment. At first, Leeches applied to the groin, and the administration of Calomel and Opium, in small doses, say 1 grain of the first, and $\frac{1}{2}$ a grain of the second, about every four hours, with a Saline draught: or, envelop the whole of the thigh and upper part of the leg in a warm Bran, or Linseed poultice, or a wrapper of carded wool or cotton, in the latter case previously rubbing in, gently, a little Spirit of Turpentine. The diet must be low at first, but when the febrile symptoms and swelling have subsided it may be generous. In the exhaustive stage of the disease, Quinine will be of service, and when it becomes chronic, carriage exercise, sunshine, air, and warm salt-water bathing, will generally prove efficacious.

LEGUMINE (Latin *legumin*, pulse). A kind of fecula, similar to starch, obtained from peas and beans, and other plants of the order *Leguminosæ*.

LEIPOSYCHIA (Greek *leipo*, to leave, and *psyke*, the soul). A term used by Hippocrates for syncope, which Calen called *Apopsychia*; it is synonymous with the *Leipothymia* of Sauvages. See *Fainting*, *Syncope*.

LEMNIAN EARTH is sometimes alluded to by ancient writers, as an antidote to poison and the plague; it was a mineral found in the island of Lemnos, which from its being cut into pieces, and stamped with an impression, was also called *sphragide*, from the Greek *sphragos*, a seal.

LEMON. The fruit of the plant which botanists call *Citrus Communis*, as all know, is one of the greatest sick-room luxuries which we possess; it is cultivated chiefly in France, Spain, Italy, Sicily, and other parts of the South of Europe; if good, it will have a tolerably smooth and thin rind, a sharp refreshing taste, and a delicious aromatic odour. The acidity in the juice is owing to the presence of *Citric Acid* (which see under the head of *Acids*); this is the most agreeable acid wherewith to make effervescing draughts (see *Beverages*); but it is expensive, and, therefore, not so commonly used as the Tartaric acid. Until recently the chief medical use of Lemon-juice was in Scurvy, in which it is not only a curative medicine, but actually a preventive; those who undertake long sea voyages, should, therefore, not fail to provide themselves with this valuable anti-scorbutic; it may now be obtained at a moderate price of most confectioners and foreign fruit dealers, especially in large sea-port towns. The best way to

preserve it for keeping is to add to it about one-tenth of Spirits of Wine; this coagulates the gummy matter, which would be likely to cause fermentation, and it should therefore be separated from the clear juice by straining. A little of it should be taken every day when away at sea, when fresh vegetables cannot be obtained, and salt provisions are much taken; lime juice is often used as a substitute, because cheaper, but has not so good an effect.



Recently lemon juice has been employed as a remedy in gout and rheumatism with great success: the dose is $\frac{1}{2}$ ounce every half hour on an empty stomach: besides being antiscorbutic and antiseptic, it is, in large doses like the above, tonic and diaphoretic. Lemon juice is also slightly tonic as well as aromatic and stomachic; it forms, with Orange peel, an ingredient in the Compound Infusion of Gentian; dried and grated, it imparts a pleasant taste to pastry, &c., as every housewife knows; for this purpose, however, and in the preparation of confectionery, the Essence of Lemon is commonly used; this, when not diluted with turpentine, as it too often is, forms one of the most agreeable of perfumes, and refreshing of flavours.

The "Salt of Lemons" commonly used for taking ink stains and iron moulds out

of linen is wrongly named ; there is nothing of lemon in its composition ; its most active component is Oxalic Acid—a strong poison. See *Acids*.)

Lemon Whey may be made by pouring very gradually into boiling Milk as much Lemon juice as will suffice to curdle it ; when required for use, dilute with hot water, and sweeten with lump sugar.

Lemonade of excellent quality may be made thus :—Pare two tolerably sized Lemons as thin as possible ; take half the rind of one, and pour on it a pint of hot water, and let it stand for about three hours : then squeeze into a large jug the juice of the peeled Lemons, with 2 ounces of Lump Sugar, pour on that a pint of hot water, and when the sugar is dissolved, add the two liquids together ; when cool it is fit for drinking.

To make *Concentrated Lemonade*, take 2 pounds of Loaf Sugar, break it up, and pour on it a pint of cold water ; let it heat gradually until it boils and is converted into syrup ; add, while hot, 1 drachm of Essence of Lemon, and $\frac{1}{2}$ ounce of Citric Acid ; a tablespoonful of this, added to a tumbler of water, makes a very pleasant drink.

LENICEPS. An instrument lately invented for the extraction of the child in difficult labour ; it differs from the ordinary forceps in being very short, and by the branches locking upon a transverse handle, so that it can be folded up in a small compass. One advantage of this invention is, that being of smaller size it does not frighten the mother, like the old fashioned instrument ; and another, that it acts very gently on the child, hence its name *leniceps*, in contradistinction to *forceps*.

LENIENTIA (Latin, *lenis*, to assuage). Medicines which have the effect of allaying irritation.

LENITIVES (Latin *lenio*, gentle). Purgatives which act in a gentle manner, and which, from being combined with warm stomachics, have a soothing effect ; the most common example we can name of the class of aperients is the Lenitive Electuary, or, as we now call it, Confection of Senna. See *Confections*, also *Senna*.

LENS (Latin *lens*, *lentis*, a bean). Properly a small, roundish glass, shaped like a lentil or bean ; the term in anatomy is applied to the crystalline humour of the *Eye* (which see).

Short-sightedness is occasioned by too great a convexity of the crystalline lens, causing a convergence of the rays of light at a point, before they fall upon the retina ;

and, to correct this, a concave glass is required. *Long-sightedness* arises from too great a concavity of the lens, so that the rays do not converge to a point, before they have passed the retina ; for this a convex glass is required. See *Sight*, *Spectacles*.

LENTICULA, or **LENTIGO**, so called from its fancied resemblance to lentil seeds, is another name for *Ephelium*, or the little yellow spots on the skin produced by the action of the sun. See *Freckles*.

LENTICULAR. A term applied to, 1, a ganglion of the head situated on the external sac of the optic nerve ; 2, a variety of true *Cataract* (which see), and *Eye*.

The term is also applied to an instrument employed for removing the irregularities of bone from the edges of the perforation made on the cranium by the trephine, in the operation of *Trepanning* (which see).

LENTIL. This is one of the leguminous plants cultivated for food ; its scientific name is *Ervum Lens* ; it is eaten all over the south of Europe, in the East, and in Egypt. The flour of Lentils is considered very wholesome, and Dr. Playfair found



that it contained more nitrogenous matter than any other pea or bean meal, and consequently more nutriment. The Hindoos, it is said, always take Lentils, in addition to their rice, when engaged in laborious work. The substances sold under the name of *Revelenta*, and *Ervalenta Arabica*, are composed wholly, or in great part, of this flour.

LENTOR (Latin *lentus*, clammy). The viscosity or clamminess of a fluid, especially of an exudation in the skin, is sometimes so

called. *Lentor of the Blood* is that viscosity of the vital fluid to which Boerhaave ascribed the existence of fever; it was his theory that whatever would change this supposed viscid state of the blood into a thinner, that is a more natural or healthy state, would destroy fever; hence the terms *attenuants*, *dilutents*, *humectants*, which we find so frequently in the works of all medical writers who believed in this theory, and sought to dissolve the tenacity of the blood by such means; medicines of an opposite character, too, which were meant to render the blood thicker, were called *inspissants*.

LEONTIASIS. A designation of the tubercular kind of *Elephantiasis* (which see).

LEONTODON TARAXACUM (Greek *leon*, a lion, and *odons*, a tooth). The common plant called Dandelion, *Dent de Leon*, or *Densleonis* (see *Taraxacum*). The botanicaal name of the March Dandelion is *Leontodon Palustre*.

LEPIDOSIS (Greek *lepis*, a scale). An efflorescence of scales over different parts of the body, often thickening into crusts, sometimes called *Scale-skin*. This is, probably, identical with

LEPROA or **LEPROSY**, that ancient disease of which we read in Scripture, and which, if met with at all in this country, is in a very mitigated form. The Leprosy of the Greeks appears to have been a scaly disease of the skin, occurring generally in circular patches; three distinct species of it are mentioned:—*L. vulgaris*, *L. alphoidis*, and *L. nigricans*, Common, White, and Black Lepra. That of the Jews appears to have been characterized chiefly by whiteness of the hair, and depression of the skin, which was covered with white horny crusts or scales. The Greek writers term this *leuce*, the Arabian *baras*; with Celsus it was a species of *vitilego*, or, at all events, a bad form of Leprosy. That this disease was at one time prevalent in our own country, we may infer from the mention made of the existence of Leper Hospitals. We have traces of one founded by Bishop Gundulph yet remaining at Rochester, in Kent, and the sites of others can be pointed out. The disease, probably, first came to us from Palestine; but this does not much concern our present subject, which is the milder form of Leprosy which is presented to us for treatment in the present day in England.

This we find to be a scaly eruption of the skin, consisting of circular patches of various sizes, having depressed centres and raised edges; these patches first appear on the angles of the knees and elbows, and then gradually extend over all the other parts of

the body, except the face and hands. The several distinct blotches by which Lepra always extends rarely exceed a range in size from the circumference of a shilling to that of a half-crown: sometimes these join at the margins, and so extend over a very considerable space. When the patches are smooth, white, and of long standing, it is called White or Dead Leprosy. When they are of a livid or coppery hue, it is the result of syphilis, and called Syphilitic Leprosy. Green says that "It is not a contagious disease, but there is no doubt of its being hereditary: it is one of frequent occurrence, though not generally formidable, and may exist in scattered patches for a long time. When the eruption is very copious, and when the whole or greater part of the body is encased, as it were, in a sort of scaly armour, the functions of the skin are interrupted in a degree incompatible with health, and the lungs and kidneys are then required to do a double office."

Treatment. If not a very formidable, there can be no doubt that this is a very obstinate disease: the only local applications which are at all serviceable are Alkaline and Sulphur Baths: a quarter of a pound of Carbonate of Soda, or the same of Sulphuret of Potash, put into a sufficient quantity of warm water for a bath, is about the right proportion. One of these should be used two or three times a week, or the skin sponged daily with a similar solution will do, changing from one to the other occasionally, and taking about once a week a tepid water bath. Some recommend a lotion composed as under, to be regularly applied every night with a soft brush or piece of sponge:—Chloride of Zinc, 12 grains; Glycerine, 1 ounce; Rose Water, 11 ounces. The constitutional treatment must depend very much upon the patient's general health, habit of body, &c.; if strong and plethoric, a course of saline purgatives, with an alterative, such as Plummer's Pill, 5 grains, every other night or so, and spare diet; if weakly and thin, a generous diet and tonics may be required; in either case Hydriodide of Potash, with Decoction of Sarsaparilla, 3 grains of the former, with 4 ounces of the latter, twice a day, will be serviceable. If the disease is obstinate, recourse may be had to Fowler's Solution of Arsenic, which should be taken in full doses, and regularly, until it produces redness of the eyes, when the dose must be gradually diminished. But this remedy should be only given under medical superintendence. The Harrogate Waters will be serviceable in Lepra if taken on the spot

Dr. Kingslake states "that several cases which had resisted every other treatment have been cured by taking 10 drops of Sulphuric Acid three times a day in $\frac{1}{2}$ a pint of water, and bathing the part with a solution of $\frac{1}{2}$ a drachm of the acid in a pint of water."

LESION (Latin *læsio*, from *lædo* to hurt). This is a term used in pathology to signify any kind of wound or bodily injury.

LETHARGY (Greek *lethe*, forgetfulness, *argia*, inactivity). A state of lethargy is one of profound and continuous sleep; it is the slightest form of coma, and has been sometimes termed *cataphora*. This seizure or affection nearly approaches apoplexy in character, and, like this disease, may arise from an overfulness of blood; or from a deficiency of circulation in the brain, owing to nervous exhaustion; or to a diseased state of the organ. Other causes may bring on Lethargy, such as an impure or poisoned state of the circulating fluid which precedes an attack of bilious or British cholera or diarrhœa, or is occasioned by suppression of the urine. Then, again, it may be a consequence of the action of narcotic drugs, or of alcoholic intoxication. The treatment will depend very much upon the cause, which should be carefully investigated by a medical man, otherwise the remedies given may rather tend to increase the evil. See *Apoplexy*, *Bile*, *Debility*, *Intoxication*, *Languor*, &c.

LETTUCE. This is a well-known edible plant which is very generally used, and agrees with most persons well, although with some persons, like all uncooked vegetables, it disorders the stomach. All the cultivated varieties have originated from *Lactuca Sativa*, a plant which has never yet been found in a wild state, it is therefore considered to be but another form of some species altered by cultivation. There can be no doubt that Lettuce, generally, exercises a cooling and soothing effect upon the system, which is not owing so much to any narcotic power it possesses, as to the great quantity of mucilaginous fluid which it contains. The Wild Lettuce, *Lactuca Virum*, is found in many parts of Britain; it is very milky, has a strong disagreeable odour, like that of Opium, and a bitter acrid taste. It yields a bitter principle and a peculiar Acid Resin, Caoutchouc, Wax, Gum, Alkali, and Alkaline Salts; from both this and the Garden Lettuce, although more than this, is obtained a bitter crystalline substance called *Lacturin*, or *Lactucérine*, or *Lactucine*, soluble in Alcohol and boiling Water, scarcely so in cold

Water, and not at all in either without alkaline re-action: this is supposed to be the active principle to which attention was first called by Dr. Duncan, of Edinburgh, who recommended it as a substitute for Opium, the anodyne properties of which it is said to possess, without being followed by the same injurious effects; that it has the same anodyne properties as Opium, is doubted by many, or if so, it is in a much milder degree; it has never come into extensive use. In England we also find the Prickly Lettuce *L. Scariola*, which possesses the same properties as the above. Another species, *L. Taraxacifolia*, a native of Guiana, is much used by the Negroes as a salad plant, and also as an opiate. In France a water is distilled from Lettuce, which is taken as a mild sedative. The French people also use the fresh leaves of the plant, boiled in water, as a cataplasm.

LEUCINE (Greek *leukos*, white). A name applied by Braconnet to a peculiar white principle obtained from muscle. By Nitric Acid it is converted into a crystalline acid called *Nitro-leucic*.

LEUCOMA (Greek *leukos*). A term applied to a white opacity of the cornea, the slightest form of which is termed *nebula*, (haziness); and a small patch or speck, *macula*; the affection is popularly known as "Film," scientifically as *Albugo* (which see, and *Eye*). From the same root as the above we have also the term *Leuce*, a name for *Leprosy* (which see).

LEUCOPATHIA. The Albino state; a deviation from the natural colour which was first observed in Africa—the individuals affected with it being termed *Leuc-æthiopes*, or White Negroes; this phenomena is owing to the absence of the pigmentary deposit under the skin which imparts its colour. In consequence of the inability to bear strong light manifested by the Albinos, the Dutch called those whom they met with in Java, *kukker-bakkers*, or cockroaches, which run about only in the dark. There is also another term from this Greek root, viz. *Leucophlegmatia*, which was formerly applied to a dropsical habit.

LEUCORRHEA (Greek *leukos*, and *rheo* to flow). Literally a white discharge, and applied to that from the vagina, its source being either that organ itself, or the uterus. This affection is popularly known as "the Whites;" it has also been variously termed *fluor albus*, *fluor muliebris*, and *les fleurs blanches*, the latter being the French name. "Of all the diseases peculiar to females," says Dr. Ashwell, "there is none so com-

men. Few married women, particularly if they are mothers, escape its attacks; very generally this troublesome discharge is associated with general debility, especially if it has continued profuse for any length of time; hence it is very desirable that attention should be paid to it at the commencement; for if neglected, it may seriously impair the constitution, and grow from a comparatively mild affection into an inveterate and dangerous disease."

The *causes* of this discharge are over exertion of the uterine organs, irritation of the rectum from loaded and constipated bowels; it may also be brought on by diarrhoea, piles, worms, irritation of the bladder, or of the nervous system; weakness too is a cause of *Fluor albus*, as well as a consequence of its long continuance; confinement in a warm atmosphere, luxurious living, and chlorosis must likewise be numbered among its exciting causes.

We can generally distinguish this disease from gonorrhoea, by the absence of local irritation and swelling of the external parts, and the glands of the groin; also by the discharge being less regular and copious.

In Leucorrhoea, this is commonly at first white and pellucid; or it may be opaque and thick, coming away now and then in lumps; after awhile the colour will perhaps change to green, yellow, or brown, and sometimes it will become very acrid, causing abrasion and smarting on passing the urine; in this stage it is apt, especially during pregnancy, to cause a gleet discharge from the urethra, of one having sexual intercourse with the patient. Ere long, if the disease is not checked, we get great local irritation, and constitutional disturbances; there will probably be costive bowels, pains in the loins, and back, great lassitude, with nervous and hysterical affections. Menstruation, too, will be irregular, at one time being altogether suspended, and at another too abundant.

Treatment. If the patient is of full habit, it will be advisable, in the first stage of the disease, to abstract some blood by cupping, or leeches on the lower part of the back. Saline aperients should be taken, a spare diet observed; local ablutions practised three or four times a day, using occasionally a Decoction of Poppies for the purpose; the hip bath and an injection of Goulard Water, with a scruple of Powdered Opium in each pint, will also be found serviceable.

The recumbent position should be preserved, as much as possible, and the parts kept cool; the practice of wrapping them

up in napkins is objectionable, as it heats and weakens them.

Local treatment will be of little avail in cases of long standing, unless the general health be attended to. To keep the bowels gently open, take Compound Rhubarb Pill, 5 grains, as often as required, and to strengthen and cool the system, a mixture like the following:—Sulphate of Iron, 12 grains; Diluted Sulphuric Acid, 1 drachm; Sulphate of Magnesia, 4 drachms; Peppermint, or Cinnamon Water, 12 ounces: take two table-spoonsful twice or thrice a day. In obstinate cases, there should be an injection into the vagina of a solution of Alum and Sulphate of Zinc, 3 drachms of the former, and 1 drachm of the latter, to a pint of Water; 3 or 4 ounces to be thrown up, while the patient lies with the hips rather elevated; this position to be retained for some time, with the parts covered by a napkin or sponge, so that the fluid may be kept in. If there is itching and irritation of the parts, it may be allayed by an injection composed of Carbonate of Soda, 2 drachms, in a quart of Bran tea or Poppy decoction. If the simple Alum and Zinc injection proves ineffectual, add a drachm of Powdered Catechu to each pint, or use decoction of Oak Bark as a vehicle for the above salts. When there is much debility, with suppressed or scanty menstruation, preparations of Iron as the above mixture, with Compound Steel Pills, or some compound of Canada Balsam, 3 grains, and $\frac{1}{2}$ a grain of Quinine, or the latter substance $\frac{1}{2}$ a drachm, with dilute Sulphuric Acid, 1 drachm, in 6 ounces of Gentian or Cascarilla; a table-spoonful to be taken twice or thrice a day. Should there be profuse menstruation, nothing is so likely to be effectual as the Iron and Acid Mixture, with or without the Sulphate of Magnesia, according to the state of the bowels. Mustard poultices to the lower part of the back, or stimulant liniments, rubbed well in every night, for a time will often prove useful; and when there is pain in the back, or headache arising from the stoppage of a copious discharge, it may be relieved by dry cupping on the loins, or three or four leeches, or small blisters.

Women, who are likely to have Leucorrhoea, should avoid all predisposing causes of the disease; such are wines and other stimulants, and hot tea or other slops, taken in large quantities: luxurious living and sensual indulgences of all kinds, especially much sexual intercourse, and anything which has a tendency to enervate and enfeeble the frame. Early rising and regular open air exercise; warm and comfortable

clothing; good food and tonic medicines, with the use of the shower bath and sea-bathing; these will prove the best preventives.

LEVATOR (Latin *levo*, to lift up). A muscle which raises any part; its antagonist is called a *Depressor*.

LEVIGATION (Latin *lavigo*, to polish, from *lavis*, smooth). A process employed for reducing earths and metallic substances to a smooth and even state: it is performed with a muller on a slab of stone or marble, and the use of a fluid in the process makes it differ from *tituretion*.

LEY. A term used for a solution of alkali in water, sometimes called *Lixivium*.

LEYDEN JAR, or PHIAL, so called from its effects having been first exhibited in the city of Leyden. This is a cylindrical glass vessel, coated up to a certain height inside and out with tin foil, or some conducting substance, so that every point of both sides of the glass may be brought into communication at the same moment: a combination of such jars or phials constitutes one form of the electrical battery. (See *Electricity*.)

We give here a cut of a single jar. It may be described as a mere plate of glass in the jar form, for the convenience of handling; an electrical excitement is produced on one side, and this operates on the chemical elements within the substance of the



glass, just as though it were a plate of air, or a plate of fluid in a galvanic combination; and the opposite side has a similarly opposite excitement, as acid and alkaline, called positive and negative; and the excitement continued by a metal surface, from

side to side, produces, when within a small distance, an explosive restoration of the two disturbed sides, considered either as acid and alkaline, oxygen and hydrogen, or supporter and combustible.

A vacuum produced in a phial of this sort has been called the *Leyden vacuum*.

LEXIPHARMICS (Greek *lexo*, to prevent, and *pharmakon*, poison). Medicines which resist or destroy the power of *Poisons* (which see).

LICHEN (in Greek *leichen*). In medical science this term stands for a papillar, cutaneous eruption, sometimes called a Lichenous rash. It is attended with a sense of tingling and a prickly heat, like that caused by the stinging of nettles. Hence we have the name

commonly applied to one of its forms, of *Nettle Rash* (which see). Scientifically, this Rash is called *L. urticus*; another variety is the Prickly Heat of the Tropics (*L. tropicus*). (See *Heat*.) Other varieties are the Simple, Hair, Clustered, and Livid Lichens (*L. simplex, polaris, circumscriptus, and lividus*). There is also a kind described by M. Bielt under the name of Spiral Lichen (*L. spiralis*), and what is sometimes called Agaric Lichen (*L. agaricus*); as well as the Tooth Rash, or Red or White Gum, to which infants are liable. This is the *L. stropulatus* of writers on *Skin Diseases* (which see).

LICHEN, in Botany, is the name of an extensive division of cryptogamous plants, constituting a genus in the order *Algæ* in the Linnæan system, but now forming a distinct natural order called *Lichenaceæ*. The general mode of growth of these plants is that of a thin, flat crust, spread over rocks and the bark of trees. Sometimes they spring from the ground, and shoot out tiny branches like miniature shrubs; and sometimes they appear as a mere gelatinous mass, or a fine powdery substance. Among them are included the Iceland and Reindeer Mosses, which, however, are quite distinct from the true Mosses. Lichens abound chiefly in the cold and temperate parts of the world. Their chief use appears to be the preparation of the surface of the earth for the growth of large vegetables; but some kinds, as those above named, are of direct essential service to man, possessing tonic and strengthening properties (see *Cetraria, Iceland Moss, or Liverwort*). They are also useful in the arts, furnishing the dyer with many brilliant colours. An acid peculiar to some varieties has been extracted, and termed *Lichenic Acid*; it appears to be identical in its character with *Malic Acid* (which see). A peculiar vegetable starch, called *Lichenin*, is obtained from the *Liverwort* (which see); it is said to possess the alkaline property of combining with acids.

LIENTERIA (Greek *leios*, smooth, and *entera*, the intestines). A species of diarrhœa, in which the food comes away only partially digested; it is sometimes called *Lientary*, or *Lævitus intestinorum*; (see *Diarrhœa*).

LIFE (Latin *vita*). The principle which distinguishes the organised from the unorganised kingdom, and for which human philosophy is unable to account. Animal life (for with vegetable we have here nothing to do) has been described as "Not merely the holding together of several unconnected living structures, but the harmonious co-

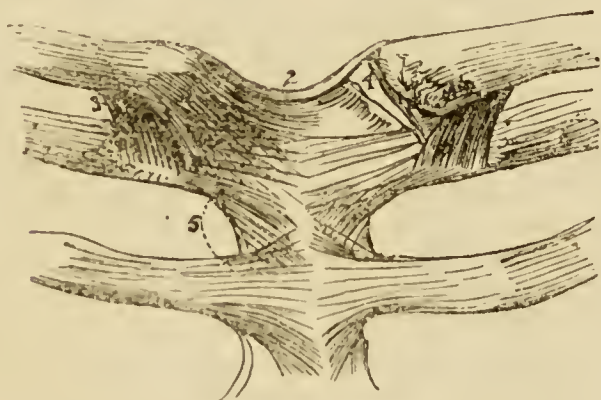
operation of all the structures and organs to maintain each other, and the whole body, in efficient action. All these depend upon the circulation of the blood, and when it permanently ceases, death ceases. Where the vital power primarily resides, it would be fruitless to inquire; but the blood in the living body is evidently alive, and anything found in it is immediately subjected to other than the mechanical, chemical, electric, &c., powers of external nature (as far, it may be added, as we have yet been able to investigate and comprehend them), and is in fact within the realm of animal vital force." What this *vis vitæ*, as the old philosophers called it, may be, we cannot tell, and it would be useless to indulge in idle speculations as to its exact nature, and principal seat in the human system; sufficient is it for us to know that it comes to us from the great universal source of all Life, and that it is an eternal principle, a spark that, once lighted, will never be quenched; an inestimable gift, which we ought to value, and cherish, and improve, for the transient and troubled life which now is, we have unquestionable authority for saying, is but a preparation for the everlasting life of rest and happiness which is to come. It is, however, with the Life of the frail, perishing body, rather than with that of the immortal soul, that we have to do at present, and it behoves us to place before our readers a few considerations as to how this may be best preserved and prolonged. This is the object of the whole science of medicine and surgery; this the great aim of all sanatory measures and precautions; pity it is that people generally are not more alive to the importance of the subject. Boards of Health and Sanatory Commissions will, and must be, comparatively ineffective, while there is an absence of a great popular and individual sense of the paramount importance of hygienic efforts. There must be cleanliness among the masses; temperance; careful selection and preparation of food; good ventilation; proper nursing in sickness; and, especially, attention to the aliments, and the growth and development of the frame in childhood; before human life will reach any thing like its maximum point of duration. The chances of disease and death are all reduced in proportion to the awakened sense of responsibility in these matters, tending to individual and general effort in the way of sanatory precautions. Improvements in medicine and surgery may do much, but absolutely nothing in comparison with what may be effected in this way. It is here that we must look for the lowering

of our rates of mortality. The reiterated and undisputed fact, that fever carries off yearly, in Britain, a larger number of victims than fell in the allied armies at Waterloo, and that one-third of the children die before they reach the age of five years, coupled with the knowledge that a very large proportion of these deaths occur from preventible causes, should surely convince us that human life must be held very cheaply, in this country, or that there must exist a lamentable state of ignorance as to the means by which it may be preserved. What these necessary means and precautions are we trust are explained with sufficient clearness and fulness under the various heads of *Air, Light, Clothing, Food, Drainage, Ventilation, &c.*, to render it unnecessary for us to dilate more upon the subject here.

LIFE ASSURANCE. This is a subject so intimately connected with the issues of life and death, that we must necessarily say a few words upon it here. To every father of a family, or young men in expectation of becoming such, we would say—insure your life! To every mother now or in likelihood, persuade your lover or husband to do this; indeed it would be a good plan for all spinsters to refuse the hand of a man, unless he could show an insurance policy as a proof of his prudence and forethought. How often has the death bed of a husband and father been cheered and comforted by the reflection that he had made this provision—perhaps the only one he could make, against leaving those most near and dear to him in a state of destitution; how often has the hour of death been embittered, and even hastened, by the terrible thought that he is the only shield between those loved ones, and want and penury. If, as we well know, anxiety of mind has a depressing effect upon the body of one smitten with disease, and renders him less likely to recover, is not that a sufficiently strong argument in favour of Life Insurance? It is in the power of very few, comparatively, to accumulate property for the benefit of their wives and families, but all, or nearly all, may put by a periodical sum from their professional or other income, something for their survivors, and, in this way, too, a provision may be made for their own old age, or for a time of sickness. The facilities for effecting Insurance are now so great, and the sums taken so small, that none should hesitate to avail themselves of one, or other, of the opportunities offered to the public for that purpose.

LIGAMENT (Latin *ligo*, to bend). A ligament is a membrane of a flexible, but compact texture, which connects the arti-

cular surfaces of bones and cartilages, and sometimes protects the joints of a capsular envelope; thus Ligaments form the tendons and sheaths of muscles, and the strong elastic tissue of which the outer coats of arteries consist; the yellow fibrous tissue which answers the latter purpose is extremely elastic; but that which connects joints, and which, under the dissecting knife, shows itself in white glistening bands, is far less so, or dislocations would be of constant occurrence. The Ligaments of the human body, of course, are very numerous; and it is not necessary for us to give a list of them. The following cut, from Wilson, exhibits those of the *sterno-clavicular* and those of the *costo-sternal* articulations, that is, those which bind the collar bone and the upper ribs to the breast bone.



1, is the anterior *sterno-clavicular*; 2, the *inter-clavicular*; 3, the *costo-clavicular*, sometimes called the rhomboid Ligament, seen on both sides; 4, the *inter-articular* fibro-cartilage, brought into view by the removal of the anterior and posterior Ligaments, whose position is marked by the dotted lines; 5, is the anterior *costo-sternal* Ligaments of the first and second ribs. The next figure exhibits an example of the Ligaments connecting and enveloping the bone at the shoulder joint. 1, is the superior *acromio-clavicular*; 2, the *coraco-clavicular*; 3, the *coraco-acromial*; 4 and 5, the transverse and capsular Ligaments; 6, the *coraco-humeral*; and 7, the long tendons of the biceps, issuing from the capsular Ligament, and entering the bicipital groove. (See *Humerus*.)

In this cut, we have a good example of the ball-and-socket joint, and of the capsular Ligament which encloses the articulating heads of the scapula and humerus, and is attached to the neck of each bone: it is thick above, where resistance is most required, and strengthened by firm muscles; below it is thin and loose, to allow of free play in the joint.

Commonly, the Ligaments are by no means sensitive, but they become extremely so when over-stretched by a strain on the



joint. (See *Sprain*.) Under such circumstances, they are liable to inflammation, as they are in gouty and rheumatic affections. Anatomists have classified Ligaments—1st, according to their form; 2nd, situation, or direction; and 3rd, according to a variety of circumstances: thus the Ligaments of the knee are *alar*, or winged; those of the corpus, *annular*, or ring-like; those of the acromion, *radiated*, or star-like; and so on: then, in the second division, we find the *inter-osseous* occurring between bones; *inter-spinous*, between the spinal processes; *inter-articular*, between the articulations, &c.: then we have the lateral, perpendicular, and podical Ligaments; the accessory, the mucous, and many others, which we need not name.

LIGATURE (from the Latin *ligo*). This is anything tied round an artery, or wart, to stop bleeding, or to remove the excrescence; it is commonly of silk or cotton, and should be strong and fine, and well waxed. Metallic Ligatures of fine wire of silver, or other ductile metal, have been recently much employed in surgical and other operations, and found very superior to any vegetable fibre, however tightly twisted.

LIGHT (in Latin *lux*, or *lucis*). That great agent by which our organs of vision are enabled to see, and take cognizance of, the beauties and wonders of creation. Into the various theories by which philosophers attempt to account for the presence and ex-

plain the phenomenon of Light, it is not our purpose to enter; we have to deal with it here, only as to its stimulating and other effects upon animal life and development, with especial regard to the humane system. Dr. Edwards, who has devoted much time and talent to an investigation of the influence of Light, remarks that persons who have abodes into which this cannot enter are apt to produce deformed children; and the illustrious Humboldt has attributed the absence of deformity among the Caribs, Mexicans, and Peruvians to constant exposure of the body to strong Light. It has also been stated on good authority, that in an extensive barracks at St. Petersburg the diseases on the dark side were in the ratio of three to one, as compared with those on the side which had most sun. Hence it has become a received fact in sanitary science, that plenty of Light is almost, if not quite, as necessary to health as an abundant supply of fresh air and pure water. Let us say, then, in the words of the Great Creator of this luminous principle, whatever it may be, "Let there be Light;" especially in the dwellings of the poor and lowly, and in the chambers of the sick, to cheer the spirits and invigorate the frame. Let there be sunshine, both moral and material, in all the dark places of the earth.

The stimulating action of Light upon living animal tissues, is best exhibited by that excessively-sensitive organ, the eye. A strong glare causes it to shrink, and become suffused with moisture, while the curtain of the lid is let fall to protect it from the continual annoyance. In arctic regions, where the reflected Light from the snow keeps the eye in a constant state of irritation, travellers suffer from inflammation of the organ, and the natives are sometimes affected with what is called snow-blindness, resulting from the like causes. That Light is capable of acting on muscular fibre, independent of the influence of the nerves, was mentioned by several of the old anatomists, but repudiated by later authorities. M. Brown Sequard has, however, proved to the Royal Society that some portions of muscular fibre—the iris of the eye, for example—are affected by Light, independently of any reflex action of the nerves, thereby confirming former experience. The effect is produced by the illuminating rays only; the chemical and heat rays remaining neutral. And not the least remarkable feature is, that the iris of an eel showed itself susceptible of the excitement, sixteen days after the eyes were removed from the creature's head. There can be no doubt, then,

that Light exerts a great influence upon the whole human system. It is a powerful nervous stimulant, and our physical organisation is largely indebted to it, as well as to heat, for the proper development of those powers and proportions, which go to constitute a vigorous and healthful existence. Under the heads of *Optics* and *Sight*, we shall speak more fully of Light as it affects the organs of vision; and then, too, we shall have something to say about *Artificial light*.

LIGHTNING. Death by means of this agent of almighty power is not of unfrequent occurrence, and serious injury, short of death, sometimes results from it. The mischief in either case seems attributable to the shock received by the nervous system in the passage of the electric fluid through some parts of the body; sometimes, but not often, it is the result of a severe burning from the clothes being set on fire.

When a person is "struck by Lightning," as it is called, he will probably be killed at once, in which case there will be unmistakable signs of death; or only stunned, and then he will remain in a state of insensibility for a longer or shorter period, according to the shock which his system has received, or has strength to endure it. There will be, probably, slow and deep breathing, with a relaxed state of the muscular system, so that the limbs may be moved about any how, and will remain as they are placed. The state is, indeed, one of asphyxia, and should be treated like *Drowning* (which see). Artificial respiration should, if possible, be induced by the same means as those recommended under that head, and the animal warmth preserved by hot applications, friction, &c.; Mustard Plasters to the spine and pit of the stomach, and a warm clyster, containing $\frac{1}{2}$ an ounce of Turpentine, with, as soon as the patient can swallow, a little warm Brandy and Water or Sal Volatile, in 20-minim doses, every quarter of an hour or so. It is a popular notion that the bodies of persons killed by Lightning do not become rigid, and that their blood remains in a fluid state; this is quite contrary to fact.

The proper course to be adopted in the event of being overtaken by a thunderstorm, is to keep at some distance from trees, or tall buildings of any kind. Do not put up an umbrella, for the metal in it will attract the Lightning, and a good soaking is a protection from the Lightning; for this reason, anything metallic about the person should be got rid of or covered. If it be in a wide, open plain, where the body is the highest object, crouch as close to the ground as possible. In a room, do not stand be-

tween the fireplace and window or doors, for the course of the electric fluid appears to be much influenced by the current of air.

LIGNIN. Is the name sometimes applied to the fibrous structure of plants which, when heated in closed vessels, yields *Pyroligneous Acid*, and a peculiar spirit called *Pyroxilic Spirit*.

LIGNUM (Latin for wood). The fibrous structure of vegetable substances, usually called woody fibre. Those used as medicines will be found in old Pharmacopœias; not as we now see them, as *cortex*, bark, *radix*, root, and so on, but as *Lignum*; thus it was *L. aloes*; *L. brazilense* (Brazil wood); *L. campechianum* (Campeachy, or Logwood); *L. colubrinum* (Snakewood); *L. nephriticum* (a bitter tasted wood, imported chiefly from Mexico, and supposed to be a sovereign remedy in *nephritis*, or inflammation of the kidneys); *L. pavanae* (the wood of the *Croton Tiglîi*, from the seeds of which Croton Oil is obtained); *L. rhodium* (Jamaica Rosewood, used in cephalic fumigations, &c.); *L. santali rubri* (Red Sanders wood); *L. serpentinum* (the wood of the *Ophioxylon serpentinum*, used as an antidote to the bites of serpents); *L. vitæ* (the wood of the *Guaiacum Officinale*, remarkable for the direction of its fibres, each layer of which is crossed diagonally); this is sometimes called *L. benedictum*, *L. indiana*, and *L. sanctum*. St. Benedict's, Indian, and Holy-wood, were other names for this. See *Guaiacum*.

LIMATURA (Latin *lima*, a file). Filings. Hence we have *L. ferri*, Iron Filings; *L. stanni*, Tin Filings; both used medicinally. See *Iron*, *Tin*.

LIMAX (Latin for slime). A name applied to the snail (*Cochlear terrestris*) on account of its sliminess. See *Snail*.

LIME. The oxide of calcium, an alkaline earth, found as a carbonate in marble, chalk, and limestone; when burned, so as to expel the carbonic acid, these substances become Lime (in Latin *calcis*, or *calx*), several forms and preparations of which are used medicinally. By themselves, neither quick nor slaked Lime are thus employed; with the former is made Lime Water (*Liquor Calcis*), which is given internally as an astringent, anti-acid, and alterative in diarrhœa, vomiting, heart-burn, and other irritations of the stomach and bowels, resulting from acidity. Acting as a solvent upon the mucus, it is occasionally given to dislodge worms; and it will sometimes, when added to a milk diet, enable a weak stomach to tolerate that which it would not otherwise be able so to do. A little Milk mixed with it

renders it less acrid and unpalatable than it naturally is. Lime Water may be easily prepared for family use, thus:—Take of unslaked Lime about $\frac{1}{2}$ a pound; fresh Rain or Distilled Water, 12 pints; first slake the Lime with a little of the Water; mix it up well, adding gradually the rest of the Water; then put the whole into a well-stopped bottle; when wanted for use, pour off the clear liquor. Equal quantities of this and Salad Oil make an excellent application for Burns (which see).

Carbonate of Lime (*Calcis Carbonas*) is used in the form of Prepared Chalk, Prepared Oyster Shells, and Crabs' Claws, as an anti-acid and astringent, for diarrhœa, heartburn, and acidity of the stomach: we have it also held in solution by an excess of Carbonic Acid in *Carrara Water* (which see).

Chloride of Lime (*Calx Chlorinata*) is extensively used in solution as a disinfectant; it is also sometimes administered in putrescent fevers, as a stimulant and anti-putrescent; largely diluted, it is applied to foul, indolent ulcers, and to some forms of cutaneous diseases: it also makes a good gargle in putrid sore throat, and a mouth-wash where there is foetid breath from decayed teeth or ulcerated mouth, and a local bath in hepatitis. This is the common Bleaching Salt of which the Bleaching Liquid is made.

Muriate of Lime (*Calcis Murias*), or, as it is now more generally called, Chloride of Calcium (*Calcis Chloridum*), is regarded as deobstruent, alterative and tonic. It is chiefly used in scrofulous diseases, bronchocele, &c.; and is given in the form of the *Liquor Calcis Chloridi*, dose from 20 to 60 minims, in milk or other demulcent liquid: in over doses it acts as an irritant poison, and therefore must be administered with care. In scrofulous and white swellings it may be mixed with the poultices.

Phosphate of Lime (*Calcis Phosphas*). This was formerly much used in medicine, under the name of Barat Hartshorn; it formed a principal ingredient in Sydenham's *Decoctum Albinum*, afterwards known as *Mistura Cornuusti*. The precipitated Phosphate (*Calcis Phosphas Præcipitatum*) is not a favourite form of administration. It is strongly recommended by some in rickets, scrofula, diarrhœa, ulcerations, excoriations of the skin and bowels, and general waste of the tissues of children; it also promotes the cicatrization of ulcers and the union of fractures; but in the latter case should not be given too freely, lest the callus be too abundant, so as to cause per-

manent deformity of the limb: the dose for adults is from 4 to 6 grains; for children, 2 or 3 grains, three times a day.

Sulphuret of Lime (*Calcis Sulphuretum*) is sometimes prescribed in skin diseases, gout, and chronic rheumatism; it is alterative, stimulant, and diaphoretic, and, in doses of 20 grains, is given as an antidote to metallic poisons; the common dose is from 4 to 8 grains. It is chiefly used, however, in the composition of Sulphur Baths, being, for this purpose, more economical than Sulphuret of Potassium. To prepare a bath, 2 or 3 ounces are dissolved in the water, and from 20 to 40 drops of Sulphuric Acid added. Although Lime exists in all plants, yet it is more especially the characteristic element of animal structures, into which it is introduced by the food eaten, as well as by the water drunk: if there is a deficiency of Lime in the nutriment taken by the young, a softness of the bones will be the consequence, while an excess of it will cause preternatural induration and brittleness, as well as morbid growths and calcareous deposits in the other tissues of the body, especially in the urinary passages. The general action of Lime upon the human system varies according to the form in which it is exhibited: thus Quick Lime is escharotic, causing inflammation, and often decomposition, of the part which it touches: when slaked, and in a state of great dilution, as in Lime-water, we find that it scarcely has any immediate or direct action; it merely combines with and neutralizes the acids of the stomach, and if in considerable quantities, absorbs the mucous and other secretions, checking also those of the organs with which it is brought into contact. After it has been absorbed into the system, it appears to augment the secretions of the kidneys, and to keep down the excess of uric acid. Altogether, it is one of the medical man's most valuable adjuncts.

LIME. The plant known to botanists as the *Citrus Limetta*, which closely resembles the Lemon tree, bearing small white blossoms, with pale yellow fruit, of a roundish, oval shape, and a protuberance like a nipple at the top, is that from which we appear to obtain the greatest quantity of the lime juice, extensively used, as an antiscorbutic. We give a cut of this plant, the juice of which, like that of the lemon and other species of the orange family, owes its acidity to the presence of *Citric Acid* (which see): it is not so efficacious as the Lemon juice; but, being much cheaper, is more used. There are many species of

Limes, but they do not differ essentially in their properties.



LINCTUS (Latin *lingo*, to lick). A term applied to soft substances, of about the consistency of syrup, which are taken by being licked off a spoon. We do not find the term in modern Pharmacopœias, confection being substituted for it; but in domestic treatment it is sometimes still used. We need not give any recipe for a Linctus, as those given under the head of *Confections* are sufficient for all purposes.

LINEA (Latin for a line); hence we have *L. alba*, a white line formed by the meeting of the tendons or the abdominal muscles; *L. semicirculares*, a semicircular line formed by the abrupt termination of the abdominal muscles; *L. transversales*, transverse tendinous lines passing from the first to the second of the above lines; *L. innominata* (an unnamed line); this is an elevated Line forming part of the brim of the pelvis.

LINIMENTS (Latin *lino*, to besmear). An external application having the consistence of an oil or balsam, sometimes called an Embrocation. This is a common form of external application, and, in most cases, is of a saponaceous or an oily nature. Very many forms of this kind might be cited from the "Materia Medica" of both ancient and modern times; but it will be sufficient to name those which are given in the latest editions of the London, Edinburgh, and Dublin Pharmacopœias; these are:—1,

Linamentum Æruginis, made of Verdigris, Vinegar, and Honey, and used as an escharotic; it is spoken of in old books under the name of *Mel Egyptiacum* (Egyptian Honey); *L. Ammonice*, *L. Ammoniac Compositum*, and *L. Ammoniac Sesquicarbonatus*, which are all stimulating; the second has been prescribed under the name of Antidynous Lotion; *L. Calcis*, which is Linseed Oil and Lime Water, equal parts; recommended for burns, and sometimes called Carron Oil, from being used at the Carron Iron Works; *L. Camphoræ* and *Camphoræ Compositum*, both stimulating, the latter most so, containing a proportion of strong solution of Ammonia and Rectified Spirit, with Oil of Lavender; the former is simply Olive Oil and Camphor, in the proportion of 1 ounce of the first to 4 ounces of the last. *L. Cantharides*, made by digesting 3 ounces of Powdered Spanish Flies in 12 ounces of Olive Oil in a steam, or water bath for three hours, and straining the product; this is not much used, although its action as a rubefacient is, no doubt, good in some cases. *L. Crotonis*, composed of Croton Oil 1 ounce, to 7 ounces of Turpentine; not a good form of application; when Croton Oil has to be applied it had better be used with Olive Oil. *L. Hydrargyri*, composed of Mercury, Lead, Camphor, Spirit, and Solution of Ammonia, 1 ounce of each of the first three ingredients, 1 drachm of the fourth, to rub down the Camphor with; and 4 ounces of the last; a good stimulating application to indolent ulcers and tumours. *L. Opii*, made of Opium, 1½ ounces; Castile Soap, 6 ounces, Camphor, 3 ounces; Oil of Rosemary, 6 drachms; and Rectified Spirit, 2 pints; or, simply Tincture of Rosemary and Soap Liniment, equal parts; a good embrocation for rheumatic pains and neuralgia: *L. Saponis*, much the same composition as the above, without the Opium: this is one of the commonest and most useful of liniments: it is generally known as Opodeldoc. *L. Simplex*, this is Olive Oil 4 parts, to 1 part of White Wax; may be used where friction only is required. *L. Terebinthine*, made with Soft Soap, Camphor, and Oil of Turpentine, 2 ounces of the first, 1 of the second, and 16 ounces of the last, a very stimulating application. Dr. Graves recommended as a rubefacient in bronchitis, a liniment composed of Nitro-Muriatic Acid, 1 drachm, rubbed down with 1 ounce of Lard, and 2 drachms of Oil of Turpentine: for rheumatism and gouty and rheumatic swellings, Aconite and Colchicum Liniments are sometimes used. St. John Long's celebrated Liniment

was made thus:—Spirit of Turpentine, 3½ ounces; Rose-water, 3 ounces; Strong Acetic Acid, 6 drachms; Oil of Lemon, 10 minims; rub down the Turpentine with the yolk of an egg, then add the other ingredients; to be applied with a sponge previously dipped in hot water and squeezed dry; shake the bottle, pour out a tablespoonful in a saucer, let the sponge absorb it, and then therewith pat over the nape of the neck for about five minutes; do this daily until the skin gets sore and irritated; then make the same application lower down, between the shoulders, keeping to the course of the spine. A good way of applying any stimulating Liniment, is to wet with it the inner surface of *Spongia Piline*, and lay it on the desired part; in this way there is no evaporation of the volatile principles which are, consequently, more active.

LINGUA (Latin for the tongue). Hence we have the terms *lingual* and *lingualis*, the former being applied to the gustatory nerve, and to veins, arteries, &c., of the tongue, and the latter to a muscle of the Tongue (which see).

LINSEED. The seeds of the common Flax (*Linum Usitatissimum*) belonging to the genus *Linum*, order *Lineæ*, possess demulcent properties which render them valuable adjuncts to medical treatment; we give a cut of this plant. Ground, they form what it



generally known as Linseed Meal, so useful for poultices, or soothing applications, to ulcerated or inflamed parts: it allays irritation and excitement, and promotes suppuration, hence it is commonly used for

abscesses and other local affections, in which it is desirable to bring matters to a crisis as speedily as possible. (See *Poultice*).

From these seeds, too, we obtain, by cold expression, Linseed Oil, which besides its great utility in the fine and useful arts, is a good application for burns, when mixed with equal proportions of Lime Water. (See *Carron Oil*).

Linseed Tea is a common domestic remedy for colds, coughs, and irritations of the urinary organs; it is the *Infusum Lini* of the Pharmacopœia, and may be made thus:—Take of Linseed, 6 drachms; Liquorice Root, 2 drachms; bruise or slice the latter, and pour on both a pint of boiling water, let it stand for four hours near a fire, in a covered vessel, then strain, and it will be fit for use as soon as cool; a little Honey, and a tablespoonful of Lemon Juice will render it very agreeable to the palate, and perhaps more efficacious.

The *Linum Catharticum*, or Purging Flax, is another plant of this genus, which is sometimes employed medicinally. It owes



its activity to a peculiar drastic principle, which has been called *Linin*, and which is afforded by the plant after the flower has fallen. Muscular rheumatism, catarrhal affections, and dropsy, are the diseases in which this plant has been found most efficacious; it has also been given with advantage in biliary disorders: it is generally administered in the form of Extract, in doses of from 4 to 8 grains, twice or thrice daily; the dried herb in doses of 2 drachms or more,

has been recommended for obstinate rheumatism.

Linseed Oil is sometimes given internally as a laxative; the dose is from 4 drachms to 1 ounce; in Milk, is the pleasantest way of taking it: the dose of the Infusion is about a wineglassful occasionally.

LINT is a preparation from the fibres of the flax plant; formerly it was prepared from old linen alone, scraped to make it soft and woolly; but now, so large is the demand, that the new material is employed, and, owing to improvements in machinery, we get it in pieces of any required width and length, instead of in small scraps as before. The new Patent Lint is thicker, softer, and more uniform in texture than the old sort, and, if it could but be made to tear easily, it would be perfect. Every one who has had to do with surgical treatment, either professional or domestic, knows the value of Lint, and Linen rags; the former can be obtained much more cheaply than formerly, hence the latter are not set such store by as they were, but they should never be needlessly wasted or destroyed. Cotton is harsh and irritating; linen soft and absorbent, hence its fitness for application to tender and inflamed parts.

LIP (in Latin *labium*, or *labrum*). The edge or border of the mouth. In man, and some other animals, the lips are two fleshy muscular parts, composing the exterior of the mouth; in man they cover the teeth, and form part of the organs of speech, being essential to the utterance of certain sounds, called *labiates* in consequence. These parts owe their red colour to their extremely vascular structure, and the thinness of the covering membrane; and their sensitiveness, to their abundant supply of minute nerves. By the colour and general appearance of the lips, we may often judge with tolerable accuracy of the health of the individual; if they be pale, and thin, and shrunken, there is a deficiency of the red globules in the blood, and a want of vigour in the circulation; this we find to be the case in *Anæmia* (which see), and some other forms of disease. When the lips are full, and have more or less purple in their tint, we know that the blood does not undergo its proper changes, and that there is danger of congestion towards the brain. The lips may be the seat of several inflammatory and other diseases; in the lower one, especially, with those who have habitually smoked a short pipe, we not unfrequently get *Cancer* (which see). They are often chapped and cracked by exposure to cold, and it is sometimes a difficult matter to heal them: the following is a good form

for *Lip Salve* to be used in such a case:—Take of White Wax $2\frac{1}{2}$ ounces, Spermaceti, $\frac{1}{2}$ an ounce, Almond Oil 3 ounces, melt together, stir well, and put by to cool; apply to the lips on going to bed at night; it may be made of a pretty pink colour by tinting the oil first with a small piece of Alkanet Root, which should be taken out before the other ingredients are introduced. When the lips heat and burn much, a little cold cream will be found a pleasant and serviceable application.

LIPOMA (Greek *lipos*, fat). An adipose tumour, formed of fatty unorganized substance, or, as Hooper termed it, a *Lipomatous Tumour* (which see).

LIPPITUDO (Latin *lippus*, blear-eyed). Applied to a chronic catarrhal inflammation of the eye-lids. This affection commonly begins towards the angles of the eye, and is thence called *Lippitudo angularis*; when attended with tingling and itching it has been termed *pruriginosa*, and sometimes *psoropthalmia*; syphilitic eruption on the eyelids of infants is called *L. syphilitica neomontanorum*. None of these cases are open to domestic treatment, and, indeed, little can be done for them by the best medical skill. The Blear Eyes with which old persons are often affected, may be somewhat relieved by a collyrium of Sulphate of Zinc, about 6 grains in an ounce of Distilled Water; the eyes to be damped occasionally with a piece of lint dipped in the liquid.

LIQUID (Latin *liqueo*, to melt). This may be shortly described as an elastic fluid, or a flowing substance, whose parts change their relative position on the slightest pressure, so that they separate by their own weight, and may be divided drop by drop. Liquids are in an intermediate state between solid and gaseous substances; they are not properly fluids, although that term is often applied both to them and gases; that is, unless we term them *non-elastic*, and the air and gases *elastic fluids*. All of these substances with which we are acquainted, except Mercury, are compound liquids; or they may be either simple gases combined, as Water and Nitric Acid; or gases with a solid base, as Sulphuric Acid, Alcohol, Ether, &c.; or solids combined, as Phosphoret of Sulphur, and Sulphuret of Carbon. It would, however, lead us further than is necessary into the realms of chemistry to pursue this subject.

From the above root we have also *Liquefaction*, that is the passing of a substance from a solid to a liquid state; this is one of the effects of heat or caloric. The term is

sometimes synonymous with *fusion*, with *deliquescence*, and with *solution*.

LIQUIDAMBER (Latin *liquidum*, a fluid and *amber*, the aromatic substance which distils from trees). This is the name of a genus of plants, chiefly American; among which is the species which furnishes the liquid *Storax* (which see).

LIQUEUR. French for a spirituous liquor composed of Alcohol, Sugar, Water, and some aromatic substance for imparting flavour, &c. The French distinguish three qualities of these—viz., the *Ratefias*, or Simple Liqueurs, in which the Sugar, Alcohol, and aromatic substance are in small quantities, as the Anisi Water, Noyau, &c.; 2nd, the *Oils*, or fine Liqueurs, containing a larger proportion of the saccharine and spirituous matters, as the *Anisette Curasco*; 3, the *Creams*, or Superfine Liqueurs, which are yet stronger than the last; such are *Rosoglio*, *Maraschino*, &c.

The same aromatic infusion may give its name to Liqueurs of different qualities, according to its strength; thus we have *Eau-de-noyau*, *Creme-de-noyau*, &c.

We mention these French Liqueurs, but to warn our readers against the use of them; very pleasant and toothsome are they, but the spirit which they contain renders them objectionable, even if the flavouring is innocent, which it is not at all times; the Bitter Almond, for instance, in the Noyau, is of a deleterious nature, and the rich luscious taste is but a temptation to drink that which is actually poisonous. Of the *Spirituous Liquors* which are now common in this country, enough has been said under the heads of *Alcohol*, *Spirits*, &c.; but of those which more immediately concern our subject, the *Medicinal Liquors*, it behoves us to speak; these are solutions, or intimate admixtures of solid with fluid bodies, the dissolving fluid being termed the *solvent* or *menstruum*. We give a list of the *Liquors* named in the latest editions of our three chief Pharmacopœias; *L. Ammoniae Acetatis*, *L. A. Citratis*, *L. A. Fortis*, and *L. A. Sesquicarbonatis*; (for the proportions, doses, &c., of these refer to *Ammonia*). We have next *L. Antimonii Tartarizati* (Antimonial Wine; see *Antimony*); *L. Arsenici Chloridi*, *L. A. Hydrargyri Hydriodatis*; to these we should add, although out of the alphabetical order, *L. Potassæ Arsenitis*, all preparations of *Arsenic* (which see); *L. Barii Chloridum* (Liquor of Chloride of Barium, sometimes given in scrofulous cases, but not often), *L. Calcis*, *L. Calcis Chloridi*, and *L. Calcis Chlorinata*, preparations of *Lime* (which see); *L. Chlorinii*, a solution of

Chlorine (which see), *L. Cupri Ammonio Sulphatis*, a solution of the Ammonio Sulphate of Copper (which see), *L. Ferri Penetratis*, a solution of Nitric Acid and Iron (which see), *L. Hydragryri Penetratis*, a solution of Nitric Acid with Mercury. (which see), *L. Morphia Acetatis* and *L. M. Hydrochloratis*, solutions of the Acetate and Hydrochlorate of Morphine (which see), *L. Plumbi Diacetatis*, a solution of the Acetate of Lead (which see), *L. Potassæ*; *L. P. Carbonatis*; and *L. P. Iodidii Compositus* solutions of the Carbonate and Iodide of Potash, (which see), *L. Sodæ Carbonatis*; *L. S. Chlorinatæ* (see Soda); *L. Zinci Chloridi*, a solution of Chloride of Zinc (which see).

Then we have what are termed the *Liquors of Surfaces*, the fluids poured out on the surfaces of the various cavities of the body, such as the *L. amnii*, the fluid contained in the *Amnium* (which see); *L. coturnii*, a limpid fluid found in the vestibule of the ear; *L. enteriei*, the natural secretion of the interior coat of the bowels; *L. pericardii*, a serous fluid contained in the pericardium.

LIPAROCELE (Greek *lipos* fat, and *kele* a tumour). A species of sarcocele, in which the substance constituting the disease is Fat (whish see).

LIPYREA (Greek *leipo*, to leave, and *pyr*, heat). Absence of heat; that coldness of the extremities which is a characteristic of some fevers.

LIQUORICE. The root of the *Glycyrrhiza Glabra*, which grows wild in many countries,



and is cultivated in some parts of England. This plant belongs to the leguminous, or pod-bearing tribe, and the extract from its root is well known, and much used under the name of Spanish juice, or Spanish Liquorice; its demulcent properties render it very useful in coughs and bronchial irritations; it is also used in heartburn, and may be taken in considerable quantities without disordering the stomach, or causing thirst. This extract is often used to cover the taste of more nauseous medicines. Good Spanish juice is hard and brittle, breaking short off when struck; it enters into the composition of many kinds of lozenges, the Bath Pipe and Pontefract Cakes among others. A soft Extract of Liquorice is used by druggists in the composition of pills, and the powdered root is also much employed.

LIRIODENDRON TULIPIFERA. The Tulip Tree, the bark of which is a stimulating tonic, and has been used in America as a substitute for Peruvian Bark in intermittent fever; and has also been found serviceable in chronic rheumatism and dyspepsia; the dose of the Powder is from 1 scruple to 2 drachms.

LISPING. A species of psellismus, or defective enunciation; sometimes caused by an unusual length of tongue; sometimes by the loss of the front teeth, but often by affectation. See *Psellismus*.

LITHAGOGUE (Greek *lithos*, a stone, and *ago*, to expel). Any medicine given to dissolve or expel calculi in the bladder.

LITHARGE (Greek *lithos*, and *argyros*, silver). An oxide of lead in an imperfect state of vitrification; this is produced in the process of refining which lead undergoes for the purpose of separating the silver which it contains: when white, the substance is called Litharge of Silver; when red, Litharge of Gold.

LITHIA (Greek *lithos*, a stone). A name applied to the Protoxide of Lithium, an alkali discovered in the earthy mineral called Petalite, and hence termed Lithia from a stone; it appears, in its properties, to occupy an intermediate position between the alkalis and the earths. A urinary calculus has also been called *Lithia*, as well as *Lithiasis*, and *Lithus*.

From the same root we get also several other medical terms, such as *Lithopedion*, a kind of stony mass into which the foetus has been converted in the uterus; when this assumes the character of bone, it is termed *osteo-pedion*. Then we have also *Lithic Acid*, a principle which is constantly present in healthy urine, and which is

generated by the action of the kidneys; its salts are called *Lithates* or *Urates*; *Lithotriptics* or *Lithonthriptics* are also names given to medicines given to dissolve stone in the bladder; and *Lithotriptor*, is the name of an instrument used for crushing, or reducing calculi to small pieces, so that it can pass out with the urine.

LITHOTOMY is the operation of cutting into the bladder in order to extract a stone there. We have various modes of performing this operation, into the particulars of which we need not enter, for, of course, only a surgeon could attempt to perform it; for one of these, the lateral operation, a peculiar instrument is used by the French surgeons, which they call *Lithotome-caché*,

LITMUS, sometimes called *Turnsole*. This is a blue pigment obtained from the *Lichen Orcilla*. In an early stage of its preparation it is of a purplish red colour, and is then called *Archil* or *Orchil*. Litmus paper, which is prepared by digesting powdered Litmus in Water, and saturating white paper in the Solution, and then drying it, is used by chemists for detecting the presence of Free Acid, which instantly turns the blue into a bright red.

LIVER. This is the largest glandular apparatus in the body, and one of its most important offices is to secrete the bile; it is divided into three lobes—viz. the Greater, the Smaller, and the *Lobulus Spigelii*. The first is situated in the right hypochondriac region of the abdomen; the second in the epigastric region; and the third in the left side of the great lobe, having two prolongations, which have been termed the *Lobulus caudatus* and the *Lobulus quadratus*.

The Liver weighs on the average about four pounds; although to the naked eye it looks like a solid substance, it is yet what is called a compound gland, that is, made up of a number of smaller glands, bound together by cellular or areolar tissue. Each of these little glands, or lobules, as they are called, is about the size of a millet seed, and is composed of a minute ramification of the hepatic artery and vein—the vessels whose special office it is to afford nutriment to the Liver—of a branch of a portal vein by which the blood returns from the intestines through the Liver to the heart, and which is forced into the cells of the duct, which conveys the bile off from the Liver. There is no doubt now that this bile is entirely secreted from the venous blood, it may be of the portal system; or if it continues in the hepatic veins, having passed into them from the hepatic artery. By this theory we can well understand how any im-

pediment in the flow of blood from the Liver to the heart is likely to cause congestion of the former organ, and how, on the other hand, any obstructions in the Liver is likely to act upon the heart and cause irregularity of operation there; thus, with sluggish Liver we get febrile and often irregular pulsations. As soon as the bile is formed, or secreted in the cells of the Liver, as much of it as is required to form *Chyle* (which see) passes into the digestive canal, while any overplus passes into that convenient reservoir the *Gall Bladder* (which see).

Having thus an important duty to perform in the animal economy, it is of the utmost consequence that the Liver should be kept free from disturbing agencies, so that it may be in a proper condition for the discharge of its functions. The evil to which it is most liable is a disturbance of its circulation, causing either active or passive congestion, both of which are by no means uncommon conditions of the organ; in the former case, there will be an increase in the flow of bile; in the latter case, probably a decrease, or an altered state of the secretion. Sometimes an inflammation of the organ occurs, but this is more common in hot climates than with us; it is called in scientific language *Hepatitis*; in this disease we have suspension of the secretion altogether, and a softening or hardening of the substance of the Liver, or the formation of abscesses, according to the degree and nature of the disease.

Active Congestion of the Liver may be a consequence of an irritated state of its tissues, owing, probably, to the retention in the blood of the materials which ought to have been taken up by the kidneys, the skin, or some other excretory organ; or it may be owing to the pressure of too much carbonaceous matter in the food; or there may be some local cause, some organic disease of the Liver itself. Either of these will tend to an excessive secretion of bile, and cause what are called bilious disorders of the stomach.

Passive Congestion of the Liver is usually the result of some mechanical impediment to the due supply of blood to the organ, or to its return from thence; the mischief may be an impeded action of the heart, or a defective operation of the functions of the lungs; or it may be caused by continued pressure upon the seat of the Liver, such as results from leaning at a desk, or remaining in a stooping position; persons of sedentary habits are likely to be affected in this way. It may be merely what is called "a sluggish Liver;" there is a diminution in the

quantity of the bile, but no alteration of its quality; in the more severe forms of Passive Congestion, however, the bile, after its secretion has been suspended for a time, becomes acrid and plentiful, causing, when it passes into the intestines, much constitutional disturbance.

The Symptoms of Congestion are generally great uneasiness in the right side, and a dull, heavy pain near to the shoulder-blade of that side; if *active*, as before observed, the bile will be plentiful, colouring the evacuations, and producing often a bitter taste in the mouth, and leading sometimes to *Jaundice* (which see); if *passive*, there is also the same uneasiness and pain in the region of the Liver, with a diminished flow of bile, or a changed condition of it, as before described; and after awhile there is probably *acute inflammation* set up, which generally seizes on the substance of the Liver, and involves the whole, or only a part of it; most commonly the former is the case.

In the acute stage of inflammation there is pain in the right side, which is increased on pressure, or when a deep breath is drawn; there is usually, too, quick breathing, often a cough, but not always either of these. Nearly always there is pain in the right shoulder, and more or less of yellowness of the eyes, and, indeed, of the whole skin; occasionally absolute jaundice; the urine is high coloured, and the fauces either pale and clayey, or tinged with greenish yellow bile: vomiting, too, is sometimes a symptom.

Treatment of acute Liver inflammation should be active measures of depletion to prevent the formation of abscesses. If the system will bear it, there should be Cupping or Leeching over the seat of the organ, to be followed up with hot Bran Poultices, and afterwards by a Blister, the latter to be several times repeated, if required: the bowels should be freely opened, and the system reduced by Calomel combined with Colocynth, or some other active purgative, to be followed by a saline aperient mixture as under. Epsom Salts 6 drachms, Liquor of Acetate of Ammonia 1oz., Tartrate of Potash 2 grains, Wine of Colchicum 1 drachm, Camphor Mixture, sufficient to make 6 ounces; 1 oz. to be taken every four hours. The Calomel be kept up for some time in small doses, combined with Opium if the pain is violent. When there is reason to believe that suppuration has taken place, the treatment must be altered, and nourishing food and tonics given with mineral acids, such as the Muria-tic, with Gentian. In chronic inflammation

the pains may be relieved by bleeding, dry cupping, repeated blisters, and small doses of Mercury; Grey Powder with Rhubarb, or Blue Pill will be best. Epsom Salts, or Cheltenham Waters should be taken regularly, with moderate exercise. A light but nourishing diet, and if possible, change of air and scene. For further particulars respecting Liver disease see *Bile*, *Dyspepsia*, *Jaundice*, &c.

LIVID or LIVIDITY (Latin *liveo*, to be black and blue). The discolouration which occurs in the body in some diseases of the heart, &c. Also the bluish mark caused by a blow or fall, and the dark circle round the eye which may be observed in some forms of disease.

LIXIVIA (Latin *lix* or *licis*). Anciently applied to water or liquor in general; or to a lye or ley made of ashes, and therefore to the impure potash: Pliny called this *Lixivius cinis*, Ley-ashes; *Lixivium vinum* is the juice which runs from grapes before they are pressed; *Lixivation* denotes the application of water to a saline body, the solution obtained being the *lixivium* or ley; *Lixivium tartari*, or tartar-ley is the *Liquor Potassæ sub-carbonates* of the old Pharmacopœias—in which also we find several other applications of the term *Lixivia*.

LOBE (Latin *lobus*). A term applied to several parts of particular organs, such as to the brain, whose lower surface is divided into the *anterior*, *middle*, and *posterior Lobes*; the liver, lungs, and ear, whose lower external part is called a Lobe; the *Lobus* of *Morgagni*, a lobe at the base of the prostrate, named after the discoverer.

LOBELIA INFLATA. This is the scientific name of the Indian tobacco or Emetic Weed, a plant of the natural order *Lobeliaceæ*, which is common in the United States of America. The whole plant is dried and used medicinally; it owes its activity to a peculiar alkaloid called *lobelina*, and is a good diaphoretic and expectorant in small doses; in large, antispasmodic, sedative, and emetic; becoming, in over doses, poisonous like tobacco. It is sometimes given to relax the muscles in strangulated hernia, strictures, &c.; but more commonly to relieve spasmodic asthma. To produce vomiting the Infusion may be given in half-ounce doses every half-hour, or the Powder in from 5 to 10 grain doses, beginning with the smallest, and gradually increasing, in plenty of Warm Water. The dose of the Extract is from 1 to 2 grains; of the Tincture from half a drachm to 2 drachms; of the Etherial Tincture from 10 minims to 1 drachm. There is also a Syrup and Vinegar



of Lobelia, but they are very rarely used, and not easily attainable.

LOBELIA SYPHILITICA. The Blue Cardinal Flower, a plant of the natural order *Lobeliaceae*, which was considered by the North American Indians a specific for syphilis, but was found on trial to be quite inefficacious in that complaint. It is emetic, cathartic, and diuretic in its action.

LOBULUS is the diminutive of *lobus*, signifying a small lobe, such as the *L. spigeli* situated at the left of the lobe of the *Liver*, (which see); *Lobule of the par vagum*, the name given to a small tuft at the inferior part of the cerebellum. See *Brain*.

LOCATELLI'S BALSAM. A nostrum once in high repute, but now deservedly out of use; its composition was Hog's-lard, Yellow Resin, Olive Oil, Venice Turpentine, Yellow Wax, and Dragon's Blood melted together and made into an electuary; and this delectable mixture was actually swallowed by thousands, who attributed marvellous effects to it.

LOCHIA (Greek *locheyo*, to bring forth). The uterine discharge which takes place some days after childbirth; in cattle it is called the cleansings. See *Labour*.

LOCK-JAW. This is the popular name for a spasmodic seizure of a dreadful and generally fatal character, which surgeons call *tetanus*. By this disease, not only are the muscles of the jaws, but those also of the whole body thrown more or less into spasm, often so violent as to break the teeth or bones. The most common form of this fearful malady is that in which the muscles of

the neck and throat are chiefly affected; it generally comes on in a gradual manner, there is slight stiffness in the back of the neck, which extends to the root of the tongue, causing great difficulty in swallowing; then the whole muscles of the face probably become implicated, there is soon tightness of the chest, and the spasmodic pain extends to the back; while the teeth become so closely and firmly set together that no food of any kind can pass them. If the spasm extends further than this, the muscles of the trunk, and, lastly, of the extremities become involved, contracting and drawing the body to the side, or backward as the case may be, so as to form an arch, resting on the head and heels. Dr. Turner says, "The suffering caused by the tetanic spasm is frightful to contemplate; the face is pale, the bones contracted, the skin covering the forehead wrinkled, the eyes fixed and prominent, sometimes suffused with tears, the nostrils dilated, the corners of the mouth drawn in, the teeth expanded, and the features fixed in a sort of grin. The breathing is performed with difficulty and anguish; there is great thirst, and the sufferings are greatly increased by attempts to swallow; the pulse is feeble and frequent, the skin is covered with perspiration; and yet, with all this torture the intellect remains clear and unaffected. Death at length closes the scene, being due partly to suffocation, and partly to exhaustion."

The *cause* of tetanus is frequent exposure to cold and damp, or it may be some local injury, such as a cut, puncture, or laceration; it more commonly results from either of these in warm climates, although intense cold alone has not unfrequently produced it: it often affects a large number of the wounded on a field of battle, who are exposed to the vicissitudes of the weather. Lock-jaw, which is produced by a wound, will sometimes show itself in four days, sometimes not for two or three weeks after the wound has been received.

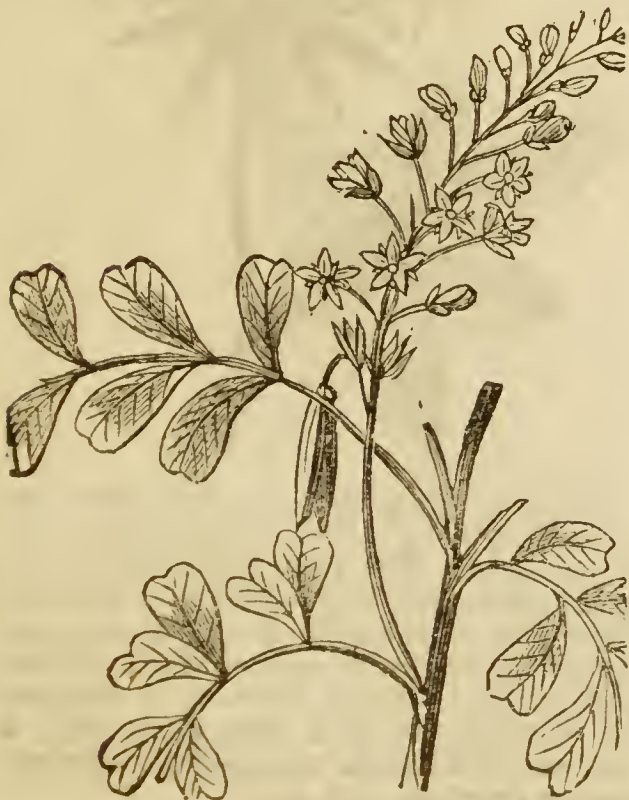
The common *treatment* for it, is the warm bath, or, if this cannot be had, enveloping the whole body in a blanket wrung out of hot water; the administration of enemas, consisting of thin Gruel, with an ounce each of Castor Oil and Turpentine: if the patient can swallow, give large doses of Opium in the liquid form, say from 30 to 60 drops of Laudanum every half-hour, until it manifestly affects the system. Cold Water, poured on the head from a considerable height, may also be of service, and friction with a stimulant liniment, such as Turpentine and Opodeldoc, down the course of the spine. The

strength must be supported by food in some way, and the desperate expedient may be resorted to of knocking out a front tooth or two, for the purpose of making an opening, through which Beef Tea and other fluid nourishment may pass into the stomach by means of a tube; sometimes this is conveyed by the nose, passing it behind the teeth, and sometimes by means of a elyster.

Dr. Jackson, an army surgeon in India, where tetanus often occurs from very slight causes, says, that he has tried all kinds of remedies, but has found none of much service except Chloroform combined with Indian Hemp and Aloes—how administered we are not informed, but presume that it must be by inhalation of the first, and injection of the two last.

LOCUSTIC ACID (from the Latin *locusta*, a grasshopper). An acid procured from grasshoppers, differing little from Acetic Acid.

LOGWOOD. The wood of the *Hæmatoxylin Campechianum*, belonging to the natural order *Leguminosæ*, shaved or rasped small, is used medicinally, in the form of Decoction, and also of Extract, in chronic diarrhœa and dysentery, as well as in infantile cholera. It acts as an astringent, without irritating the coats of the stomach, as some medicines of this class do. The dose of the Decoction, which is made by boiling 10 drachms of Logwood Chips in a pint and a-half of water, until it is reduced to a pint, is from 1 to 2 fluid ounces; or for a child two years old, from 2 to 3 drachms; of the Extract, from 10 to 20 grains may be taken.



LOINS. See *Lumbus*.

LONGEVITY—Length of Life. The duration of human life, although uncertain as regards the individual, is yet exactly determinable on the average of a large number of cases; were it not so, there would be no correct basis for the calculations of insurance companies, which rear their structures of figures upon bills of mortality, and know to a fraction what rate of premium they can safely charge. It is not within our province to enter into the calculations which enable them to do this; sufficient for our purpose will it be to speak of some of the causes which militate against the duration of life. Neglect in childhood, bad and insufficient food, defective ventilation and drainage, want of attention to cleanliness in house and person, unhealthy occupations, indulgence in excesses of any kind; epidemic and endemic diseases, arising, often, from one or more of the above causes: by these it is that our bills of mortality are swelled, and thousands are hurried to their graves long before the natural term of their existence is ended. The three score years and ten allotted to man is reached by comparatively few; and although we now and then read of a case of great longevity, yet this is quite an exception to the rule, and therefore a matter of wonderment. See *Age*, *Mortality*.

LONGING. The morbid appetite which occurs in women during pregnancy—a craving for certain articles of diet, sometimes of the most out-of-the-way kind: if they are attainable, and not actually deleterious, it is best to satisfy this longing; if not, its gratification may be denied, without danger of the consequences which are popularly supposed to follow such denial. See *Pregnancy*.

LONGITUDINAL. A term applied to two sinuses of the dura mater. See *Brain*.

LONGUS COLLI. A long muscle at the back of the œsophagus, which supports and bends the neck. *Longismus dorsi* is the name applied to the muscle between the spinous processes of the vertebræ and the angle of the ribs.

LONG SIGHT. An affection of the vision in which the objects are only seen correctly when they are a long way off. Cullen termed it *Dysopia proximorum*; it is the *Vue longue* of the French surgeons. See *Sight*.

LOOSENESS, or Purging. See *Diarrhœa*.

LOOSESTRIFE. Scientific name *Lythrum Salicaria*, a native plant of the natural order *Lythraceæ*, sometimes called Purple-spiked Willow-herb; has demulcent and

astringent properties, which render it useful in inveterate diarrhoea. Dose, of the Powdered Herb, 1 drachm three times a-day ; of



the Decoction, made by boiling 1 ounce of the Herb in a pint of Water, 2 fluid ounces may be given.

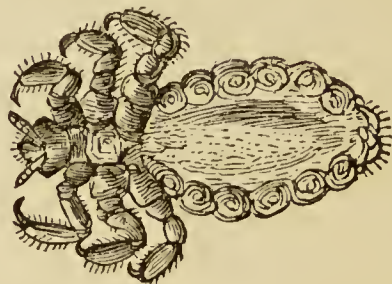
LORDOSIS (Greek *lordos*, curved). Pro-curvation of the head and shoulders, or anterior crookedness. Posterior incurvation was formerly called *cyrtosis*, and the lateral form *hybosis*.

LOTION (Latin *lotio*). A wash, or any kind of liquid remedy intended for outward application ; properly the term includes collyria, embrocations, fomentations, and liniments, but its application is generally restricted to those liquid applications intended for any part of the body, which are laid on cold, and not rubbed in.

The Lotions of the *Pharmacoecia* will be found mostly under the heads of *Aqua* and *Liquor* ; they may be classed in four divisions—viz., astringent, cooling, sedative, and stimulating. Alum, Sulphate of Zinc, or any astringent substance in solution, also Ice, and very Cold Water, make the first ; of the second, Plain Water is a good example, or it may be combined with one-third of Spirit, or with Vinegar ; the Lead Lotion, such as Goulard Water, is also cooling, as well as astringent and sedative. A lotion of Prussic Acid possesses the latter quality, as do Decoctions of Opium, Poppy, Hemlock, &c. For the treatment of surface inflammations, sprains, dislocations, fractures, wounds, &c., Lotions are amongst the most valuable

aids to the medical man. Various formula for their preparation will be found scattered through this work, under the heads of the diseases or injuries in which they are chiefly used, or of the substances, such as lead, which form their bases.

LOUSE. This humble parasite of the human body is generally the accompaniment of filth and squalor, and disease and wretchedness, and flourishes and increases in exact



ratio with the neglect of personal cleanliness. The mere idea of it is repulsive and disgusting, and when we examine the creature under the microscope, we find that it more than realises all our preconceptions.

LOVAGE. The *Levisticum Officinale* of botanists, belonging to the natural order, *Umbelliferae*, is sometimes grown in gardens as a salad plant.



It has a strong and peculiar odour, and abounds with a yellowish, pale green, resinous juice. The roots and fruit are aromatic, stimulant, and diaphoretic, and have been used as remedies for flatulency, and hysterical disorders arising from uterine obstructions : *Lovage Cordial*, is prepared by steeping the fresh roots in brandy, it was once a favourite stomachic, but we seldom or ever hear of it now.

LOW SPIRITS. This is a state of mind generally associated with dyspepsia, in which all kinds of imaginary evils are conjured up, and the slightest pain, or unusual feeling, is looked upon as the precursor of some dreadful malady: persons so affected always fancy themselves on the verge of danger, and hence are fearful and irresolute in the steps they are called upon to take; they may be of sound mind in other respects, but in regard to their own bodily state and condition are decidedly monomaniacs. The affection appears to depend upon a want of energy in the brain, the causes of which are various, it may arise from intense study, some great stroke of affliction, indolence and inactivity, or excessive indulgence in venereal or other excesses, or deranged digestion. In either case the patient should be treated with gentleness and consideration, so as to show that interest is taken in his welfare, he can never be either laughed or forced out of his delusion, therefore the endeavour should be to direct his attention—to take him out of himself as it were. Change of scene, cheerful society, engaging the mind in some art or pursuit, which although not too laborious, requires the use of the mental powers; exercise, tepid and shower baths, are among the remedial measures in this case. The bodily health must be carefully watched and preserved by such means as may be necessary. See *Hypochondriasis*, *Nervousness*, *Vapours*.

LOXIA (Greek *loxos*, twisted). *Wry Neck* (which see). From this root we have the term *loxarthros*, an obliquity of a joint, without spasm or laxation.

LOZENGES. (Latin *Trochisci*). These which are, or ought to be, made chiefly of sugar are much relished by children; and are, therefore, often made use of as vehicles for the administration of medicines, especially of such as, from their powerful nature, are divisible into very small doses. In throat affections also, and other cases where it is desirable to apply the remedial agent gradually, Lozenges are useful: thus, Nitrate of Potash may be advantageously taken in this way, and also Ipecacuanha and Morphine, where there is constriction or bronchial irritation; only in the case of the opiate, as in that of other strong medicines, care should be taken to ascertain the precise quantity contained in each Lozenge, so that an overdose be not given: sufficient attention is not paid to this by Lozenge makers and venders generally, so that the medical practitioner scarcely likes to recommend this method of administration, although he knows the advantage of it in

many cases. Very little is done by the apothecary now in the way of making lozenges, this branch of the business being pretty much in the hands of the confectioner, who often adulterates the sugar with “daff,” a mineral white, in other words Plaster of Paris. Sugar confections are very commonly adulterated in this way, and sometimes to a large extent, and the colouring matter which renders them so gay and attractive, is frequently of a most poisonous nature, so that one is almost afraid of giving or recommending sweets to children. If given at all, they had better be the transparent uncoloured kinds. We are not speaking now of the medicated Lozenges, of which there are in the Pharmacopœia 10 different sorts, viz.—Acacia Lozenges (*Trochisci Acaciæ*) made with Gum Arabic, Starch and Sugar. Tartaric Acid Lozenges (*T. Acidi Tartarici*), made with Tartaric Acid, Sugar, and Volatile Oil of Lemons; much as the common Acidulated Drops ought to be, but these we fear are too often prepared with Sulphuric Acid. Chalk Lozenges (*T. Cretæ*), made with Prepared Chalk, Gum, Nutmeg, and Sugar; good for looseness of the bowels in children. Liquorice Lozenges (*T. Glycyrrhizæ*), made with Extract of Liquorice, Gum, and Sugar; much like the Bath Pipe. Lettuce Lozenges (*T. Lactucarii*), made with Extract of Lettuce or Lactucarium; slightly anodyne. Magnesia Lozenges (*T. Magnesiacæ*), made of Carbonate of Magnesia, Nutmeg, and Sugar; good for acidity and heartburn. Morphine, and Morphine and Ipecacuanha Lozenges (*T. Morphiæ* and *T. Morphiæ et Ipecacuanhæ*), anodyne and expectorant. Opium Lozenges, the same. Peppermint Lozenges (*T. Menthæ Piperitiæ*), good for flatulency. Soda Lozenges (*T. Sodæ Bicarbonatis*), anti-acid. There are also Cinnamon, Ginger, Rose, Tolu, and many other kinds of Lozenges, for which there are no authoritative formula given, and which, therefore, are not recognised in medical practice. See *Sweets*.

LUES VENEREA. Latin for the plague of Venus; an old name for venereal disease, or syphilis, &c.; it has also been called *Morbus Aphrodisius*, *Morbus Gallicus*, and several other names.

LUMBUS, the loins. From this root we have *Lumbar*, the designation of nerves, arteries, &c., belonging to the region of the loins; hence also the *Lumbo-abdominal*, or *Lumbar plexus*, the *Lumbo-sacral* nerves, and the *Lumbo-dorsal* region; and *Lumbar abscess*, a chronic collection of pus which forms in the cellular substance of the loins behind

the peritoneum, and descends in the course of the psoas muscle, hence is sometimes called *Psoal Abscess*.

LUMBAGO (Latin *lumbus*, the loins). A rheumatic affection of the muscles of the loins. This, as many of us well know, is an extremely painful affection; the pain being aggravated by any action which brings the muscles involved in the disorder into play. Like sciatica, it is but a modification of rheumatism; nevertheless, it requires, in some measure, a peculiar treatment. When accompanied by fever, and much pain, which is aggravated by the warmth of the bed, leeching or cupping is advisable, with aperients and diaphoretics; 3 grains of Calomel at night, with about 10 grains of Compound Ipecacuanha Powder, and a Senna draught in the morning, following it up with this mixture: Solution of Acetate of Ammonia, 1½ ounces; Wine of Colchicum, 1 drachm; Sweet Spirits of Nitre and Simple Syrup, of each 2 drachms; Camphor Mixture, 4 ounces; take a fourth part about every four hours. The Dover's Powder should be continued every night—not the Calomel; about a couple of doses of this, at intervals of a week or so, will be found sufficient. Warm applications to the loins will afford great relief; one of the best is a large bran poultice, applied quite hot all over the loins. Dr. Graves recommends a stream of hot water, directed with considerable force against the part; it is beneficial not only on account of the heat, but also for the mechanical impulse which it gives. When there is no fever with the Lumbago, the best medicine is Volatile Tincture of Guaiacum, 1 drachm in Cinnamon Water, three times a day, with the Dover's Powder at night, and friction with Soap Liniment, and Tincture of Aconite, or Opium, about a drachm to the ounce; or apply a Belladonna Plaister, keeping the bowels freely open with a Colocyath Pill occasionally, or a draught of Senna, or Compound Decoction of Aloes. Decoction of Sarsaparilla, with Iodide of Potassium, may be also given with advantage. In obstinate cases, Acupuncture, Electricity, and Galvanism, have each and all been successfully applied. The following is a good form for a liniment to be used in such cases: Strong Liquor of Ammonia, Tincture of Opium, Spirit of Turpentine, and Olive Oil, equal quantities; rub in warm, night and morning. See *Rheumatism*, *Sciatica*.

LUMBRICUS (Latin for slippery) is another name, from this root whence we have *Ascarus Lumbricoidis*, the long round worm found

in the intestines; and *Lumbricus Cucurbitinus*, the Gourd Worm, so called because its joints when broken present the appearance of a gourd.

LUMBRICALES (Latin *lumbricus*, an earth-worm). A name given to four muscles of the hands and feet, which are so called on account of their supposed resemblance to the earth-worm.

LUNA (Latin for the moon). An old alchemical name for silver, hence Nitrate of Silver was termed *Lunar caustic*.

LUNAR CAUSTIC (Latin *luna*, the moon). A name given by the old alchemists to the Nitrate of Silver (which see).

LUNA CORNEA (Latin for horn silver). A name for the Chloride of Silver.

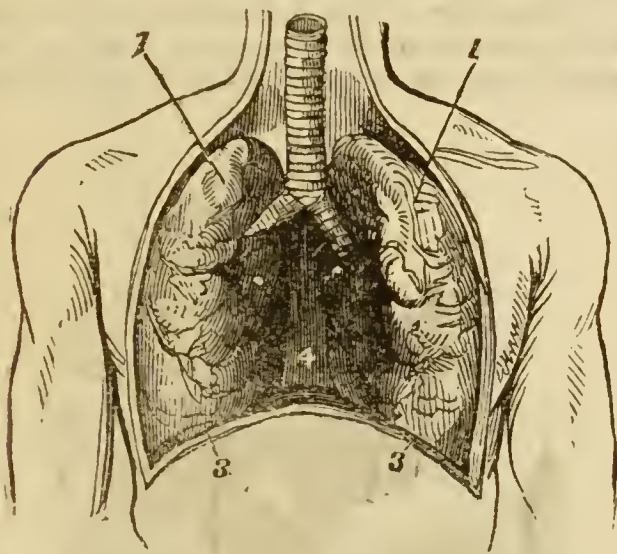
LUNA FIXATA (literally fixed moon) was a name given to the Oxide or Flowers of Zinc, formerly much used as a remedy in chronic affections. See *Zinc*.

LUNACY. Applied to madness, because it was considered that mad people were much affected by changes of the moon. See *Insanity*.

LUNCHEON. This, as our readers are aware, is a kind of intermediate meal between breakfast and dinner; the necessity for it must, of course, depend upon the length of interval between these two meals. With the classes who dine late it is really necessary that they should take some sustenance about one or two o'clock, but it should be of the lightest description—a little fruit, with a crust of bread, or a biseuit, ought to be sufficient; but, too often, the Luncheon is more like a dinner, and, superadded to that heavy meal, gives the digestive organs too much work. Where the dinner is taken at mid-day, or thereabout, of course no Luncheon is required, unless the breakfast is a very early one; and when Luncheon is taken before a late dinner no supper can be required; four meals a day being quite as much as the stomach should be burdened with. It was formerly customary for English labourers to have their "lunch" or "elevener" between their early breakfast and mid-day dinner, and again between that meal and their late tea, which was also supper, and working hard they required it; most of them, we fear, must now be satisfied with three meals a day, without their half-meals to help them on. See *Diet*, *Meals*.

LUNGS These are two vesicular organs situated in the thorax or chest, the cavity of which, together with the heart and larger blood vessels, they nearly fill up; so that when the walls of this cavity are compressed, the air is forced out of the minute air cells of which the lungs are composed, into the

several elastic membranes (the bronchi) connected with them; these bronchial passages afterwards unite, and form one tube, the trachea or windpipe, through which the air passes upwards and downwards in the act of inspiration and expiration, or breathing, as it is popularly called. A reference to the following diagram will enable our readers to understand this more clearly. Here it will be seen how each division of the Lungs (1, 1) occupies its own side of the chest; the left is the smallest of the two, because the heart, whose place (4) is between the Lungs, takes up more room on that side than the other. The windpipe, or trachea, at the top has the larynx, or organ of voice; while the lower extremity divides into two branches or bronchi, one for each Lung, on entering which it divides and subdivides into extremely minute tubes, which terminate in the air cells, small membranous cavities, on the walls of which the



blood circulates in a network of veins, in such a way that it is brought into immediate connection with the atmospheric air, which is drawn in by each inspiration, and so obtains its due supply of oxygen; that, and other gases of which the air is composed making its way through the extremely thin membrane which forms the air-cells: thus noxious, as well as healthful vapours, or gases, are introduced into the circulation, and men are poisoned by breathing, as well as by eating and drinking, deleterious substances. If we examine the structure of the Lungs, we find that it is porous like a sponge; when by the action of certain muscles the capacity of the chest is increased, the air rushes in to fill the vacuum, and expansion of the Lungs takes place; then, the muscular movement ceasing, the ribs, by their weight and elasticity, contract and force out the air, and this

alternate expansion and contraction constitutes breathing, in the act of which we see the chest rise and fall. The tubes, air cells, and blood vessels of the Lungs are held together by what is called cellular tissue, and the whole are enveloped in a membrane which covers their surface and also the under surface of the ribs, for which latter purpose it is reflected back; this membrane is called the *Pleura* (which see); also *Bronchi*, *Glottis*, and *Larynx*—all organs intimately connected with the Lungs, and necessary to carry on the work of *Respiration* (which see); also *Breathing*.

A reference to the cut given in our description of the Heart (see Vol. 1 p. 366) will show the relative size and positions of these two most important organs more clearly than the above diagram.

We know that the action of the Lungs may be forced or increased by an exercise of the will; in this case other muscles than those usually employed are called into play; hence the stoop in the shoulders, often observed in asthmatic people, and others with whom breathing is difficult. Mental emotion, and increased bodily exertion, will also cause an accelerated action of the Lungs, as will those inflammatory and other diseases which stimulate arterial action. From 15 to 22 is the average number of respirations in a minute, under common circumstances; but this number may, and often is, very greatly increased by excitement, exercise, or disease.

The average weight of the Lungs in a healthy condition is about 40 ounces; they are, as we have seen, of a conical shape, embracing the heart between them, being internally concave to receive this organ, and externally convex to suit the concavity of the chest; in their narrow part upward they extend a little above the fifth rib, their broad and slightly concave bases resting upon the diaphragm, and extending further down behind than before: their colour is a pinkish gray mottled with black—their shape we have already explained, they hang free in the chest except where they are attached to the spine, or rather to the *mediastinum* by the pulmonary arteries and veins, and by the bronchial tubes on either side; the areola, or cellular tissue, which connects together the arteries, veins, or cells, &c., is called the *Parenchyma* of the Lungs, and constitutes the second distinct tissue, of which they are composed; the 1st, or outer, being the *pleura*, and the 3rd, or inner, the mucous lining of the air passages, or cells into which the air enters when we breathe. So great is their number, that they have

been calculated to amount to 170,000,000, forming a surface thirty times greater than the human body. Every one of these cells is provided with a network of blood-vessels, by means of which the blood is brought into immediate contact with the air over every portion of their surface. When this great amount is taken into consideration, we shall at once feel how necessary it is to supply pure air to the Lungs with every breath we breathe. Here then we have a beautiful and complicated piece of mechanism, in which the purification of the blood is effected, and the power of which, of producing at will a current of air through the Lungs, makes the utterance of vocal sounds easy.

The Lungs of an infant before birth are dark red, and contracted into a small space, within the cavity of the chest; they are firm and specifically heavier than water, in which therefore they sink, whether entire or cut into pieces; they also give out little or no blood, and no air-bubbles arise from them; this, therefore, is considered a good test whether a newly-born infant found dead, under suspicious circumstances, was really born so; if it has ever breathed the Lungs will have become inflated, so as to float on water; they will then be of a pale-red colour, and appear of a loose spongy texture; having expanded, too, so as to fill the cavity of the chest, and cover the heart, as we see them in the diagram of that organ above referred to.

The diseases to which the Lungs are mostly liable, are all, in their first stages, of an inflammatory character; and it is important to ascertain, as soon as they are attacked, in which of the various tissues, or other structures, the mischief resides. *Pleurisy*, *Pneumonia* and *Bronchitis*, are the three chief forms of Lung disease, and the symptoms and treatment of them will be found under their several heads; see also *Asthma*, *Consumption*, *Croup*, *Hooping Cough*, *Inflammation*, *Pthisis*, &c. The state of the Lungs can generally be ascertained with tolerable certainty by means of *Auscultation* (which see); the passage of air into, and through them, giving rise to certain definite sounds well understood by the practised ear, applied closely to the outside of the chest, either with or without a stethoscope. When the Lungs are not affected, these sounds vary but slightly in different individuals; so that any deviation from their ordinary and natural tone, or compass, is easily detected as an indication of disease, which sometimes renders the Lung, so solid, that the air cannot penetrate its tissues, and sometimes fills the cavity which contains it with water; in

either case percussion will but make a dull heavy sound. Then the power of conducting sound varies according to the condition of the structure, so that an application from without is sure to produce such a response from within, as gives the skilled physician all the information which he requires. To illiterate persons, this process of sounding the chest doubtless appears very mysterious, and he who can thus obtain knowledge of the condition of Lungs, or any other internal organ must appear to them something like a magician; but it is by no means difficult to understand the principles on which such investigations are conducted, and when once understood, the mystery ceases. It requires, however, a delicate sense of hearing, and considerable experience in this branch of therapeutics to enable one to give a decided opinion as to the nature and progress of any mischief which may be going on in the pulmonary cavity of the body.

LUNGWORT. The *Pulmonaria Officinalis* of the natural order *Boragaceæ*, has been so called from its supposed efficacy in diseases



of the lungs; it is mucilaginous and slightly astringent, and is regarded as emollient and pectoral; when burnt it yields about the seventh of its weight of ashes, which are very bitter.

LUPULIN. A name given by Dr. Ives to the active principle of the *Humulus Lupulus*, or *Hop* (which see).

LUPUS (Latin for a wolf). A tubercular affection, occurring especially about the

face, commonly ending in ragged ulcerations of the nose, cheeks, forehead, eyelids, and lips. It is so called from its eating away the flesh like a wolf; it is sometimes called *Noli me Tangere*, or touch me not. See *Skin Diseases*.

LUSCITAS (Latin *luseus*, blind of the eye). A term applied by Beer to a distortion of the eyeball, which somewhat resembles squinting, but differs from it in the want of power to move the affected eye when the other is closed.

LUTE or **LUTING**. A mixture of clay, sand, and other materials, made up into a stiff substance like dough, and used for closing the joints of retorts, receivers, &c. in chemical experiments, to make them airtight; *Fat Lute* is made of Powdered Pipe-clay and Boiled Linseed Oil formed into a mass like putty.

LUTEOLIN. The colouring principle of the Woad, or Dyers' Weed (*Reseda Luteola*).



A native plant which has a bitter taste, and diuretic and diaphoretic properties, although it is not now used medicinally.

LUXATION (Greek *luxo*, to put out of joint). The removal, by violence or otherwise, of the articulated surfaces of bones out of their proper situations. See *Dislocation*.

LYMPH (Latin *lymp̄ha*). A colourless fluid, like water, which circulates in the *Lymphatics*, which are minute tubes, pervading every part of the body; their office appears to be entirely that of absorption; their arrangement is that of a dense network, from which they gradually converge into branches of continually increasing size, until they terminate in two main trunks,

called the right and left great lymphatic veins, through which the Lymph is poured, with the chyle from the thoracic duct, into the right and left subclavian veins. The lymphatics, with the lacteals, constitute the vessels known as absorbents. (See *Absorption*.)

Lymph is composed of fibrin, albumen, chloride of sodium, carbonate of soda, phosphates of lime and magnesia, and carbonate of lime. Raspail says it is decidedly alkaline, and considers it, in fact, a variety of chyle, or a colourless blood.

The term *Lymph* is also applied to any thin animal exudation, or watery matter: thus we have many morbid secretions under that name, such as *Vaccine Lymph*, *Adhesive Lymph*, &c.

The most frequent form of spurious cataract is called *Lymph Cataract*, of which Beer observes that only this deserves the name of membranous, as this alone consists of an adventitious membrane, which is the result of inflammation. See *Cataract*.

LYRA. A part of the brain sometimes called the *psalterium*, it consists of lines impressed upon the under surface of the posterior part of the body of the fornix. See *Brain*.

LYSSA (Greek for canine madness). A term which Dr. Good applied to hydrophobia, which is sometimes called *Entasis Lyssa*.

LYTTA. The old name for the *Cantharis vesicatoria*, or blistering fly. See *Cantharides*.

M. This letter signifies, in prescriptions, 1st, *Manipulus*, a handful, when herbs, flowers, chips, or any like substance, is ordered; 2nd, *Mensura*, by measure; 3rd, *Misce*, mix. Thus *M. fiat haust* signifies "mix and let a draught be made; and 4th, *Mitte*, send: thus *M. pil viii*, "send 8 pills."

MACE. A thin, flat scale, or membranous substance, which envelopes the nutmeg, of which it is in botanical language the *axillus*. It is one of our most highly valued spices, its characteristic properties depending upon the presence of an essential oil. See *Nutmeg*.

MACERATION (Latin *macero*, to make soft). The steeping of any substance in a cold liquid—it may be spirits, or water, to soften it or draw out its qualities; *Digestion* is in either hot or cold liquid; *Infusion* is always in hot; *Decoction* means subjecting the substance to continued heat, or boiling; and *Extraction* involves evaporation of the liquid.

MACHAON. The name of an ancient phy-

sician, said to be a son of Esculapius the god of physic; hence, particular inventions have been dignified with his name, as *Asclepias Machaonis*, a collyrium, described by Scribonius; and in old works medicines in general are sometimes called *Ars Machaonia*.

MACIES (Latin *macieo*, to lean). *Atrophy*, *Emaciation*, *Wasting*, from whatsoever cause, is so denominated. See these heads.

MACULA (Latin for a spot). Applied to a small patch or speck of the *Cornea* (which see), and *Eye*. In the plural, *Maculae*, it signifies a permanent discolouration of the skin, generally the result of an alteration in the natural texture of the part. *Maculae*, or spots, have been distinguished as, 1st. *Ephelēs*, or sunburn, generally called freckles; 2nd, *Nævus*, or mother spots; 3rd, *Spilus*, or thickening and discolouration of the rete mucosum; 4th, *Moles*. See these heads.

MADAROSIS (Greek *madao*, to be bald). A defect or loss of the eyebrows, or eyelashes. See *Eye*.

MADDER. The root of the *Rubia Tinctora*, of the natural order *Rubiaceæ*, is chiefly valued for the excellent dye which it furnishes. The plant was formerly considered emmenagogue and diuretic, and was much used in dropsy, jaundice, and female and



visceral abstractions; but is not now recognised as of any importance by medical practitioners. When administered in a state of decoction, it tinges the blood, urine, and even the bones, red. The plant is a native of the south of Europe, in some parts of which it is extensively cultivated for dyeing purposes.

MADWORT. A common name of the American plant, *Alyssum plantago*. See *Alyssum*.

MAGISTERY (Latin *magister*, a master). This name was formerly applied to almost all precipitates, which were supposed to be subtle and masterly preparations; but at present it is attached to one or two only, and but seldom to these. The sub-nitrate of bismuth is sometimes still called Magistery of bismuth.

MAGMA (Greek *maggomai*, to knead dough). Literally a kneaded or squeezed mass of any kind, or a sediment. This is a term which has now become obsolete; it was sometimes applied to a kind of salve.

MAGNES ARSENICALIS. An old corrosive preparation of equal parts of antimony, arsenic, and sulphur, mixed by fusion; we are not aware that it is ever used now.

MAGNESIA (Latin *magnes*, a magnet, or loadstone). This is one of the primitive earths, having a metallic basis called *Magnesium*. According to Dr. Paris, Magnesia was originally a general term, expressive of any substance which had the power of attracting some principle from the air, and that the peculiar body which we now so designate, was first sold as a panacea by a canon of Rome in the beginning of the seventeenth century, under the title of *Magnesia Alba*, or Count Palma's Powder. It is now administered in three forms, viz., Carbonate of Magnesia (*Magnesia Carbonas*), which is the commonest kind; Calcined Magnesia (*M. Usti*), which is the purest sort, and requires to be kept in stopped bottles; and Sulphate of Magnesia (*M. Sulphas*), which is the Bitter Purgative Salts—the *Sal Catharticum Amarum* of the old medical writers: it is a combination of Magnesia and Sulphuric Acid, and is found ready formed in some mineral waters; its having been first procured by evaporation from those of Epsom, gave occasion for the name Epsom Salts, by which it is commonly called; more correctly it is named Sulphate of Magnesia: (for its uses and doses see *Epsom Salts*).

Both the pure Magnesia and the Carbonate are anti-acid, and act as mild laxatives on the bowels; but if given too often, or too largely, as purgatives, they are apt to accumulate, in the intestines, in insoluble masses. We give Magnesia as an anti-acid in dyspepsia, heart-burn, pyrosis, gouty, and lithic disorders. It is a very safe laxative for children, especially when combined with Rhubarb; in this combination it is administered in diarrhoea, and as a common purgative. The dose of Magnesia is from

3 to 5 grains for children; from 10 to 30 grains for adults, according to the required action. In habitual constipation, a combination of Magnesia, Rhubarb, and Ginger is found serviceable: this is commonly called *Gregory's Powder* (which see). A mild effervescent draught, which is slightly aperient, may be made by mixing 1 drachm of Carbonate of Magnesia with 2 table-spoonful of Water, and then adding 1 table-spoonful of fresh Lemon Juice, or $\frac{1}{2}$ a drachm of Citric Acid; it may be rendered more agreeable by the addition of a little grated Nutmeg and powdered Lump Sugar. The Calcined Magnesia is always to be preferred; but especially so when there is much wind in the bowels, or when they are in an irritable state. For heartburn, about $\frac{1}{2}$ a drachm of Magnesia, with 20 drops of Sal Volatile, should be taken just before a meal: about 15 or 20 drops of Compound Tincture of Lavender may be added. A clear solution, called Dinneford's Fluid Magnesia, has long enjoyed a high reputation; it is a mild, and not unpleasant aperient, and may be taken safely by both children and adults, especially if a little Syrup of Ginger be added to it. Magnesia, it should be remembered, only acts as an aperient when there is acid in the stomach; therefore for this purpose it is best taken after fruit of some kind.

MAGNESIA WATER is made by mixing 4 ounces of Carbonate of Magnesia with 1 gallon of water, and impregnating it with 10 times its volume of Carbonic Acid Gas, by means of a forcing pump or soda water apparatus. It makes a clear solution, is a good anti-acid, and an excellent vehicle for anti-acid, and lithotropic medicines.

MAGNET, or LOADSTONE, is an ore of iron found in the mines of Sweden and other countries; it is so called, say some, because the name of its discoverer was Magnes; others derive its name from the city of Magnesia, in Asia Minor, near which it was first found. The artificial Magnet is a small bar of iron or steel, which, when set at liberty, assumes a northerly and southerly direction; these points being termed the north and south poles of the magnet, while the tendency to acquire these directions is called *polarity*.

The Magnet, or Loadstone, in powder, if we are to believe Dr. Paris, formerly entered into the composition of certain plasters, which were supposed to be thereby endowed with the power of drawing arrow heads and bullets out of the body. Paracelsus and others give several forms of preparations of this kind, one of which was

called *Attractivum*, and another *Opodeldoc*—a name which has been since applied to the compound Soap Liniment.

MAGNETISM is that peculiar property of certain bodies, particularly iron and some of its compounds, by virtue of which they naturally attract or repel one another according to determinate laws. This property was first observed in the native Magnet, or Loadstone, as above described.

In considering the nature of this property we must divide the subject into two branches. 1st, *Electro-magnetism*, which comprehends the phenomena resulting from the connexion between electricity and magnetism; 2nd, *Animal-magnetism*, which, on account of its real or supposed efficacy in the cure of diseases, is that branch of the subject with which we have here to do.

Anton Mesmer, a native of Mersburg, in Suabia, who studied at Vienna, and took his degree of Doctor of Medicine in the University of that city in 1776, was the discoverer of the supposed influence of Magnetism in human diseases, and the name Mesmerism was applied to the theory which he propounded, and which was first made known in this country in 1829, by Mr. Richard Chenevix, who published a series of papers in the *London Medical and Physical Journal*. Dr. Elliotson was one of the first English physicians who expressed belief in Mesmerism; he was followed by Mr. Herbert Mayo, Professor of Physiology at King's College, London; Mr. Braid, of Manchester, and others. But notwithstanding the extraordinary effects undoubtedly produced by this mysterious agent, Animal-magnetism has never taken very deep root in the public faith of this country. At present we hear very little about it, although a few years ago it had its advocates and demonstrators on every public platform. Scientific men generally, who have pursued those branches of study which would best enable them to understand the subject, believe that its influence is attributable to the effect of an excited imagination upon the nervous system of the patient; the uncertainty of its operation favours this impression, and renders it next to useless as a remedial agent. There are no known laws by which it can be regulated; no principle, by which to guide its application; with some persons—very many—it is altogether ineffective; with others, it produces effects most strange and incomprehensible. That, by means of a few passes of the hands in certain directions over the face, a patient should be sent into a deep sleep, which goes the length of insensibility to pain—should be rendered locally or gene-

rally cataleptic, or be thrown into a state of somnambulism, with its accompanying conversational power—should be entirely, as it were, under the will of the operator, who has the power of removing the influence, and restoring the patient to feeling and consciousness—all this is so wonderful, and altogether out of the range of ordinary phenomena, that we scarcely wonder that, by some, it should be attributed to Satanic agency; the more especially when we step forward into the deeper mysteries of *Clairvoyance*, with its pretended insight into things past, present, and future; its intuitive knowledge of all hidden secrets; its ability to read a closed book, as well as an open one, and to understand the thoughts of the heart before they are expressed. All this, we are told, the *clairvoyante* is able to do, and yet we find that he cannot answer some simple question propounded to him while in this peculiar Mesmeric state.

As a remedial agent, then, we cannot conscientiously recommend Mesmerism; it may be of service in some neuralgic cases, those in which every remedy having failed, it may be desirable to give the patient another chance—a kind of peg to hang a hope on.

Among the theories which have been propounded to account for the effects produced by Mesmerism, two only merit notice. The first is that of Mesmer and his immediate followers, who attributed the phenomenon to the action of a subtle fluid in the bodies of animals, which enables them to exercise an influence on each other at a distance, just as a magnet affects iron; hence the name Animal Magnetism. This hypothesis, of a nervous fluid, susceptible of being influenced, and producing an influence more or less modified, was adopted by most writers on Mesmerism, until Mr. Braid, by a series of experiments, convinced himself and others that the Mesmeric state may be produced without any influence from a second person, but by simply directing the attention, by means of the eyesight, to some particular object, and keeping it there for a time. The state of trance, as it were, so produced, Mr. Braid called *Hypnotism*, and he accounts for the phenomenon by supposing that “there is a derangement of the cerebro-spinal centres, and of the circulating respiratory and muscular systems, induced by a fixed state; absolute repose of body, fixed attention, and suppressed respiration, concomitant with that fixity of attention.” He further adds, that he believes that in all cases “the whole depended on the physical condition of the patient, arising from the causes referred

to, and not at all on the volition or passes of the operator throwing out a magnetic fluid, or exciting into activity some mystical universal fluid or medium.” These are the two theories by which the phenomenon has been accounted for: our readers may take which of them they please. For ourselves we are more inclined to the second than the first, although neither of them are to our minds quite satisfactory. In simple electricity we have known laws to guide us; Electro-magnetism and Galvanism we can pretty well understand; although with respect to the exact nature of these there is yet much to be learned; but here we are quite in the dark, with only the glimmering light of hypothesis, like a Will-o'-the-wisp, before us. Before Animal Magnetism can take its place as a true science, we must ascertain its nature, define its powers, and be able to calculate with some degree of certainty, not only how it will act in certain cases, but why it does so act: until we can do this we cannot safely employ it in the treatment of diseases. For subjects cognate with this, see *Electricity, Galvanism*.

MAGNUS MORBUS, Latin for the Great Sickness or disease; a term applied by Hippocrates to *Epilepsy* (which see).

MAIZE, or *Indian Corn*, scientific name *Zea Moys*, belonging to the natural order



Gramineæ, or Grasses. This is no less a staple article of food, than rice to the inhabitants of warm countries, and is far more nutritious than that grain. From whatever quarter of the globe it originally came, and this is a doubtful point, it has certainly been cultivated from a very early period

both in the old and the new world; it was, no doubt, the corn mentioned in Scripture, and its cultivation at the present day is more widely extended than that of any other grain used as food, for which purpose it is admirably adapted, being very nutritious. According to analysis, it consists of 77 per cent. of Starch; 3 of a principle analagous to Gluten, called *Zein*; 2.5 of Albumen; 1.45 of Sugar; 0.8 of extractive matter; 1.75 of Gum; 1.5 of Sulphate and Phosphate of Lime; 3 of Lignin; and 9 of Water. In North America it is the chief article of diet, and most of the flour which we get from thence is Maize flour. In that country they eat the green ears roasted or boiled, under the name of "hot corn." They separate the starch and use it for domestic purposes, exporting it largely to this country, under the name of Oswego Arrow-root; it is wholesome and nutritious, and makes excellent puddings, custards, &c. When Maize first came into this country we called it "Turkey Corn:" it has never become properly acclimatized so as to become an agricultural crop, although some has ripened under favourable circumstances.

MAL (Latin *malus*, evil), hence we have *Mal de la Rosa*, the name given by Thierry to scarlatina, or scarlet fever; *Mal de Siam*, a name given in some parts of India to yellow fever; *Mal del Sole*, a name of the Italian elephantiasis, so called because it is popularly ascribed to the heat of the sun's rays; *Mal des Ardens*, one of the designations of a disease which prevailed greatly in the dark ages, as a sequel to war and pestilence. It is placed by Sauvages under the head of *Erysipelas Pestilens*, and by Sagar under that of *Necrosis*; it has also been called *Kriebel Krankheit*. See these heads.

MALA (Latin for the cheek); adjective *malar*.

MALACIA (Greek *malakai*, softness). Depraved appetite; or a desire for particular kinds of food, so strong as to lead to a disgust of all other kinds: this is sometimes called *Pica*, *Mal d'estomac*, or dirt-eating. See *Appetite*, *Depraved*.

MALACHITE, or Green Bice, is a native copper ore, being a hydro-carbonate of the peroxide of Copper (which see).

MALAGMA (Greek *malaygo*, to soften). A term synonymous with cataplasms and other applications which have a softening property.

MALACOSTEIN (same root as above). Applied to softness of a bone (in Latin *Mollities ossium*).

MALARIA (Latin for bad air). A term applied to the unwholesome effluvia which generally arises from marshy or swampy

ground, giving rise to what is called with us marsh fever; in India, jungle fever is the name. To emanations of this kind may generally be ascribed ague and other forms of intermittent fevers, one of which prevails about the Pontine marshes near Rome, and is the *Malaria Campagna*.

MALFORMATION. Bad shape or form; a deviation from the natural form of a part or organ; it may be *defective* when an organ is entirely deficient, as the heart, &c., in *acardia*; *irregular*, as in the misplacement &c., of parts in the heart, constituting the *qualitative* malformation of Meckle; *superfluous*, when consisting of excessive development of an organ, as in the case of supernumary auricles, &c.

Malformations in newly-born children are so various as almost to defy enumeration; among the most common may be mentioned an imperfect closing of the lower part of the spinal canal, which may be known by the presence of a soft yielding mass like a bag of fluid there; surgeons call this *Spina bifida*; there is also an imperforate condition of the passages, which may be suspected when the meconium and water are not passed from the womb of the mother soon after birth, in this case an examination of the child by the medical man should at once be instituted; then there are deformities in the limbs, such as *Club-feet*, absence of fingers and toes, *Hare-lip*, &c., all of which are at once evident to the eye, and most of which admit of no remedial measures at the time, if they do at all. See those heads.

MALIC ACID. This is an acid obtained from apples and some other fruits; it is said to be identical with *sorbic acid*; its salts are called *Malates*. When heated in a close vessel it is decomposed and forms a new acid called *Pyro-malic*. The Malic acid is that which imparts so pleasant a flavour to apples.

MALIGNANT (Latin *mal*, bad). A term applied to diseases when they assume a severe and intractable form, so as to render it likely that they will terminate fatally. Among the malignant diseases of this country may be reckoned typhus fever, cholera, cynanche, and the new form of throat disease, *Diphtheria*.

MALIS. The name of a cutaneous disease produced by parasitic worms, which were formerly called *dodders*. In old medical works we find these different names given to the different varieties of this skin affection; *M. pediculi*, or lousiness; *M. pulicis*, or flea-bite; *M. acari*, or tick-bite; *M. filariae*, Guinea worm; *M. æstri*, gad fly-bite, *M. gordii*, hair worm.

MALLEOLUS (Latin, diminutive of *Malleus* a mallet). The ankle, so called from its resemblance in shape to a mallet; there is an outer and an inner Malleolus. See *Ankle*.

MALLEUS. Latin for a hammer. One of the *ossiculæ auditivæ*, or small bones of the *Ear*, (which see). From the same root we have also *Malleatio*, a form of chorea, consisting of a convulsive action of one or both hands, which rise and fall like a hammer; also *Malleolar*, a term applied to two branches of the posterior tibial artery. See *Leg*.

MALLOW. This plant which is so commonly found in the English fields and hedges, and which botanists distinguish by the name *Malva Sylvestris*, belongs to the natural order *Malvaceæ*; it contains a considerable quantity of mucilage, which it yields readily to water; it is, therefore, valued for its demulcent and emollient properties, and is, like the Marsh Mallow, sometimes employed medicinally. For a more full account of these two plants, and representations of them, see *Althea*.

MALT. The designation of grain, more particularly barley, which has become sweet by the conversion of the sugar into starch. It comes not within our province to describe the process by which this change is effected in the constituent elements of the grain. The chief use of Malt is in distilling *Spirit*, and brewing *Ale* and *Beer* (which see). It is also converted into Wine and Vinegar, and is occasionally employed to make an alterative analeptic infusion; it is mucilaginous, demulcent and nutritious, and has sometimes proved beneficial to consumptive patients.

MALUM PILARIS (Latin *pilas* a hair). A complaint arising from the irritation caused by hairs sticking to the skin—generally, on the backs of infants, producing incessant itching, and sometimes raising small tumours; it is sometimes called *Crinones*.

MAMMA. Latin for the breast; plural, *Mammæ*; the organs which furnish the milk; hence all creatures which suckle their young are called *Mammalia*, and the glands which secrete the lacteal fluid, in women, are called the *Mammary* glands: they are situated within the adipose tissue, or fatty substance of the *Breast*, (which see).

MAMA-PIAN. The term applied in Africa to the master fungus, or Mother-yaw, supposed to be the source of all the other tumours of *Phrambesia* (which see).

MAMILLA. The diminutive of *Mamma*, meaning literally a little breast, is the

name given to the conical prominences in the structure of the kidney, from the points of which the urine oozes out; they are sometimes called *papillæ*, which has the same meaning. *Mamillary* is applied to an eminence of the inferior vermiform process of the *Cerebellum* (which see), and *Brain*.

MANCHINEAL. The *Hippomane Mancinella* of botanists, belonging to the natural order *Euphorbiaceæ*, a tree growing in the



West Indies, South America, and Arabia, every part of which is highly poisonous, so much so that persons are said to have died from merely sleeping under its branches. This, however, is probably an exaggeration. All the parts of the tree, even the green fruit, are full of a milky juice, which is acrid and corrosive, and with this the natives poison their arrows: if the odour of it, which resembles wormwood and tansy, is inhaled, it causes a pricking sensation all over the person, and sense of constriction at the throat. The ripe fruit is about the size of a small apple, from the Spanish name of which, *Mancinella*, the tree derives its name. This fruit has an agreeable odour, and at first an insipid taste; but after eating it, there is a burning in the mouth, and inflammation in the intestines. Dried and powdered, it is said to be a good diuretic, and the seeds, to the number of ten or twelve, are violently so, as is also a gum-resin, similar to guaiacum, which the tree produces, and which is sometimes given for dropsies.

MANDRAKE. The *Mandragora Officinalis* of botanists, belonging to the natural order *Solanaceæ*. This is a plant to whose root strange superstitions have been attached from a very early period. The old magi-

ians used it in their incantations, and affirmed that it grew in the form of a human being, and uttered a shriek when pulled from the earth. It possesses narcotic properties, but one or two of the berries may be



eaten without inconvenience. The poets, both ancient and modern, constantly allude to this plant; thus Shakspeare we may remember, makes Cleopatra say—

“Give me to drink *Mandragora*, that I
May sleep out this great gap of time.”

MANGANESE. Sometimes called *Savin de verre*, or soap glass. This is a native metal, resembling iron in some respects; but it is so alkaline that it speedily oxidizes in air. It is found mostly as the grey oxide, but the black oxide is common also, either as a sulphate, a phosphate, or a silicate. The black bin, or peroxide, is the form most generally used by chemists, and sometimes by medical practitioners. For scabies and syphilis, it is given internally, in doses of from 3 to 20 grains; in the former disease, and in some cutaneous maladies, it is also applied in the form of Ointment. The salts of this metal are believed by some to be equal to those of iron, for their tonic properties; hence the Acetate, the Carbonate, and the Sulphate, are used medicinally: the first as an alterative, in doses of 5 to 10 grains; the second, for the same diseases, and in the same doses as the Binoxide; and the last as an alterative simply, in doses of 5 to 10 grains; as a purge and cholagogue, dose from 1 to 2 drachms. There are preparations of Manganese with the Sulphates and Carbonates of Iron, in which the properties of the two metals are combined. The Chloride, Iodide, Malate, and Tartrate of Manganese are also sometimes given, in

the form of Pills, in scrofula, anæmia, and various skin diseases.

A combination of the Black Oxide, Salt and Sulphuric Acid, makes a good mixture for the evolution of chlorine, as a *Disinfectant* (which see).

MANGEL, OR MANGOLD WURTZEL. The kind of Beet-root which is most largely cultivated for the feeding of cattle, and the manufacture of sugar. See *Beet*.

MANIA. (Greek for madness.) This is insanity, or disordered intellect. Sauvages makes a classification of such cases under the heads of *Vesaniæ* or as *Hallucinations*, denoting erroneous impressions of the understanding; and *Morositates*, or *Morbi pathetici*, consisting of depraved appetites, and other morbid changes of the feelings and propensities. Then we have *Monomania*, from the Greek *monos*, alone; that is, insanity upon one particular subject, the faculties being unaffected upon every other; *Dementia*, which is incoherence, or true chaotic madness, embracing the first stage of fatuity; and *Amentia*, which is its last stage, being an almost total obliteration of the faculties; this is sometimes called *Demomania*. See *Insanity*, *Lunacy*, *Madness*.

MANNA. A term derived from a Chaldaic root, signifying What is it? referring to the miraculous food by which God supported the Children of Israel in the Wilderness; with regard to which we may still ask the above question, for certainly no article which we now call Manna could have been the substance which bore the name of old. The sweet concrete juice which now goes by the name is produced by several plants, but chiefly the *Ornus*, or *Fraxinus*, *Europæa*, and *O.* or *F. Rotundifolia*. (For cut of the first see *Fraxinus*).

This juice exudes spontaneously, but is generally obtained by making incisions in the tree; the best kind is called flake Manna (*M. canulata*). Manna is referred to in old medical works under various names—such as *M. calabrina*, *Ros calabrinus*, *Acromel Alusar*, *Drysomel*, or Oak Honey, *Mel ærium*, or Aerial Honey, Nuba, &c. It has a sweet and slightly bitter taste, and acts as a gentle laxative; its purging property being due to the presence of a peculiar unfermentable sugar called *Mannate*, which may be extracted from it by boiling alcohol. In disorders of weakly women, and the affections of children, both Manna and Mannate are useful; having no unpleasant taste they may be conveniently mixed with the food; the dose of the former is, for children, 1 to 2 drachms; for adults, 1 to 2 ounces:

of Mannate, about half the quantity will be sufficient.

Manna Brigantina, or Briancon Manna, is the concrete juice of the *Pinus Larix*, or *Larch* (which see).

MARANTA. Arrowroot. That which is sold under this name in the shops, is a form of starch procured from the rootstocks of various species of plants belonging to the family *Marantaceæ*. There are three kinds of arrowroot known in the shops, the West Indian and the East Indian arrowroots, and Tous les Mois. The West Indian is the produce of a species of *Maranta*, called *M. Arundinacea*. The East Indian is pro-



duced by another species, the *M. Indica*, and Tous les Mois is obtained from the *Canna Edulis*.

Although arrow-root, sago, tapioca, and potato starch are all composed of the same constituent, their flavour is very different; hence the preference given to arrow-root as an article of diet. This flavour depends on some peculiar principle which is produced in the plant from which the starch is obtained, and by very careful preparing can be entirely got rid of. Arrow-root is used for making cakes, puddings, and a thick gelatinous fluid in great request in the sick room. It is a property of starch to combine with water at a temperature of 180° , and form a gelatinous compound. This property renders it very useful in cookery, and seems to increase the digestibility of the starch itself.

Arrow-root is frequently regarded as **very nutritious**; but if what we have stated

above is correct, it will be seen that it is not nutritious in the proper sense of the word. Those foods can alone be called nutritious that contribute to the building up of the fabric of the body, by adding those materials to the tissues which are being constantly removed by the wear of the body. Now starch does not perform this function, and is entirely consumed in the body in maintaining its animal heat. Arrow-root, however, and the other forms of starch, are frequently mixed with nutritious matters, such as milk and bread; and in this way the food into which they enter becomes nutritious.

Still, it may be said that children become fat when fed on Arrow-root; and this is an undoubted fact. The explanation is, however, easy. When the carbonaceous substances are taken into the system in larger quantities than can be consumed in maintaining animal heat, they are changed in their characters, and become converted into oil, which being deposited in the tissues, produces fat. This oil is not a living part of the body; and a person may get fat even without having his frame nourished, or his strength increased. This is an important fact to bear in mind, as many persons get fat upon certain kinds of diet, without getting any stronger, or more able to perform the functions of the body.

Although to be considered rather as a delicacy than a medicinal article, yet Arrow-root undoubtedly has some claims to our notice in the latter respect; its emollient properties rendering it valuable in disease of digestive organs. When given to invalids suffering from diarrhœa, a little Tincture of Catechu or of Rhatany may be added to it, or if not this, a piece or two of Cinnamon should be boiled in the milk with which it is prepared. As a food for children, a tablespoonful, added to a pint of boiling milk or water, will make a stiff and nutritious jelly; the powder must be first rubbed down with a little of the cold fluid in a basin; the rest, when in a boiling state, added to this, gradually stirring the whole; then pour the whole back into the saucepan, and let it remain on the fire for about five minutes, taking care to keep stirring the whole time it is thickening, or there will be lumps: the addition of a little Loaf Sugar, Grated Nutmeg, and Lemon Juice, and, for adults, a glass of Sherry Wine, makes this very agreeable to the palate. In the same way Arrowroot may be added to Beef Tea, to increase its nutritive qualities; Blanche-mange and Puddings may also be made of Arrowroot. For receipts, see "*Wife's Own Book of Cookery*."

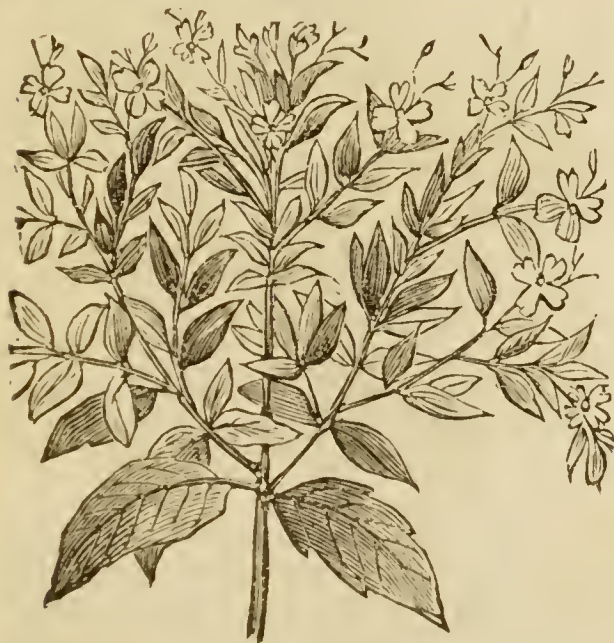
MARASMUS (Greek *marasno*, to wither). This term, which signifies wasting of the body, was formerly a general term for *Atrophy*, *Tabies*, *Phthisis*, or any disease which resulted in *Emaciation* (which see), and other of the above heads.

MARCORES (Latin *marcor*, from *marcco*, to become lean). General emaciation. Much the same meaning as the last.

MARGARIC ACID (Greek *margaros*, a pearl). This is an acid procured from soap, sometimes called *Margarine*; it is composed of lard and potash, and obtained the above name from its pearly appearance; its salts are called *Margarates*; a principle discovered by Chevrul in spermaceti has been termed *Margarine*.

MARINE ACID (Latin, *mare* the sea). The Muriatic, or Hydrochloric Acid, procured from Common Salt by distilling it with Sulphuric Acid and water over a water bath, was formerly so called: a common name for it is Spirit of Salt. See *Acids*.

MARJORAM. The *Originum Vulgare* of botanists, of the natural order *Labiatae*, is a common wayside plant with us; it has some sudorific, emmenagogue, stomachic and antispasmodic properties; it yields, by distillation, a volatile oil, called Oil of Marjoram or *Originum*, which is stimulant and carminative; the dose of this is from 5 to 10 minims; it may be taken on Lump Sugar; the dose of the Infusion of the plant is from 1 ounce to an ounce-and-a-half; the Oil is often used as an ingredient in liniments for sprains, &c.



MARMALADE. A preserve made of Apples, Lemons, Quinces, Oranges, &c.; that made of the Seville Orange is the most wholesome, having a stomachic and slightly tonic pro-

perty; persons who are dyspeptic, or bilious, will do well to take this on bread instead of butter; it may be purchased at a cheap rate of every confectioner, or prepared by boiling the fruit and sugar together for about an hour, stirring frequently; the proportion is about 1-third of the first to 2-thirds of the last; the Oranges should be cut into thin slices, and have the pips taken out, but the peel left on them.

MARRIAGE. This religious and lawful union of the sexes is one on which it is desirable we should make a few remarks. That the married state is one which, in both male and female, conduces most to health, various observations tend to prove; thus it has been ascertained, as the result of careful statistic inquiry, that married women at the age of 25 have, on the average, 36 years of life before them; while unmarried women of the same age have not, on the average, more than between 30 and 31 years. Again, in men the mortality between the ages of 25 and 45 averages 18 per cent. in the married, but 27 per cent., or one-third more, in the unmarried. Much of this excess is probably due to the indulgence in excesses, unsettled life, and want of home comforts, which single men especially suffer from; but this does not militate against the value of the argument in favour of the married state, which is, undoubtedly, the one intended by God for man, and best suited to his nature. We would not, therefore, argue in favour of *early* Marriages, for it is undoubtedly a great evil, both morally and physically, for parties to become thus united, at an age when little or no preparation can have been made for the cares, duties, and responsibilities which they incur. Any female, who commences child bearing before the age of two or three and twenty, will be sure to suffer in her own constitution, and she will most probably entail debility on her offspring. Neither should entrance into the married state be too long delayed, or there may be difficulties in the way of conception, parturition, and lactation, one or all which will seriously interfere with the health and happiness of both husband and wife, and perhaps render futile all hopes of a family. From 21 to 26 or 28 is the most eligible age for marrying in women; but the nearer to the former age the better; the man may be 2 or 3, or even 5 or 6 years older, without any detriment to the prospects of the union; of course the advisability of marrying at all must depend upon the relative positions and means, temperament, and tempers of the parties

themselves; these are circumstances into which we cannot enter.

Statistical returns show that suicide is most frequent among single persons; and this we might expect, for however great may be the distress in the families of the poor, yet the father and mother in this case have ties which bind them to the earth, and their weight of troubles is lightened by being shared. They may enjoy those pleasures too, which it is natural for both men and women to long for, without plunging into crime, and loading their souls with remorse, or contracting diseases which frequently make life a misery and a burden.

On the score of physical and mental development, it has been clearly established that a mixture of different races is most conducive to this. There is no doubt that the intermarriages of distinct nations, or at least of families, totally unconnected with each other, tends greatly to elevate the standard of both. It has been contended, by those well qualified to judge, that the energy, enterprise, perseverance, stamina, and high intellect of the Anglo-Saxon people have resulted from the admixture of blood and races consequent on the successive occupation of our country by conquerors of different nations.

In Pope's "Tenth transmitter of a foolish race," we have a picture of the dwarfed intellect, and impaired physical powers, resulting from intermarriages through many generations among family connections; such should be avoided as much as possible. Another very important consideration connected with this subject of Marriage, is that of hereditary tendencies to physical or mental diseases, of this we have already spoken, under the head *Hereditary*, and therefore need only call the attention of our readers to it here.

MARROW. The animal fat which is found in the cavities of long bones. As an article of diet, it possesses the same nutritive properties as fats generally. It enters into the composition of several toilet articles, such as pomade, &c., for which it is particularly adapted.

MARRUBIUM VULGARE. The scientific name of the common *Horehound* (which see).

MARS (Latin *martis*). The mythological and alchemical name of iron, whose salts were formerly called Martial salts, and the protoxide *Martial Ethiops*. See *Iron*.

MARSUPIALIS (Latin *marsupium*, a pouch). The former name of a muscle in the thigh, now called the *obturator internus*.

MARUM SYRIACUM (or *Teucrium marum*).

The Syrian herb, *Mastich*; a bitter aromatic plant, smelling like ammonia, which has been used as an errhine, and said to be efficacious in nasal polypi.

MASS (Greek *massomai*, to knead together). A term commonly applied to the substance of pills before division: it is also synonymous with quantity; thus the mass of a body is the quantity it contains.

MASSA CARNEA. The *flexor accessorius* muscle, which lies in the sole of the foot, in a small mass of flesh, which is the meaning of the above Latin term; it is connected with the *flexor longus* (see *Foot*), and is sometimes called *Plantar pedis*.

MASSETOR (Greek *massaiomai*, to chew). A muscle which assists in effecting the movement of the jaw, necessary in chewing. Hence we have *Masseteric*, applied to a branch of the inferior maxillary nerves, and to veins, &c., belonging to the *Jaw* (which see.)

MASSICOR. Yellow Oxide of Lead. When partially fused by heat, it is called *Litharge*, (which see) also *Lead*.

MASTIC or **MASTICH.** The resinous gum of the *Pistachia Lentiscus*, a tree which grows in the countries bordering on the Mediterranean, and belongs to the natural order *Terebinthaceæ*. Besides being employed in



the manufacture of varnish, it is used as a masticatory in tooth affections; it forms an ingredient in stimulating tinctures applied to the mouth and gums, such as the Compound Tincture of Ammoniacum. The substance which remains on dissolving Mastic in alcohol is termed *Masticin*.

MASTICATION (Latin *mastico*, to chew). This is the act by which food is reduced to

a proper state for swallowing; it is commonly very imperfectly performed, and hence we have so many troublesome cases of indigestion, and disorder of the bowels, into which the aliment passes in too crude a state. During the process of mastication the food becomes mixed with saliva, and thus reduced to a proper consistence: to "bolt it," as many do, in large lumps, is not giving fair play to the digestive organs, and we need not wonder that they often rebel, and refuse to perform their work. Perhaps the greatest advantage of artificial teeth is, that they enable the wearer to chew his food properly, and we doubt not that a life is often prolonged by the ability to do this.

MASTICATORIES are substances which on being chewed promote a flow of saliva by stimulating the excretory ducts; they are of an acrid or hot nature, and are sometimes called *Sialogogues* (which see).

MASTODYNIA (Greek *mastos*, the breast and *odyne* pain). Pain in the breasts in women, common in hysteria, and also attendant on *Lactation* (which see).

MASTOID (Greek *mastos*, and *eidos* likeness). Shaped like the breast or nipple; a term applied to a process, and foramen of the temporal bone. See *Head*.

MATERIA MEDICA, Latin for Medical Materials. Applied to that branch of the healing art which relates to the nature and operations of medicines: these remedial agents may be divided into, 1st *Natural*, or those which are found ready prepared by nature; they may be either simple or compound, organic or inorganic, the former belonging to the animal or vegetable kingdom, the latter to the mineral: 2nd, *Artificial*, or those which have been modified by addition or subtraction of some of their parts; these are called Pharmaceutical preparations, and belong to the department of chemistry.

Dr. Cullen arranges all substances into two great divisions, 1st, *Nutrients*, which he subdivides into fruits, oleraceous herbs, roots, seeds, and nuts: 2nd, *Medicines*, which are classed according as they act upon *solids*, either simply as astringents, emollients, &c., or by producing an effect upon the living body: or on *fluids*, either by changing their fluidity, as attenuants and inspissants, &c., or by modifying their chemical composition, as demulcents, anti-acids, &c., or by evacuation, as emetics, cathartics, diuretics, &c.

Dr. Murray arranges the *Materia Medica* into four divisions—1st, *General Stimulants*, which are diffusible, as narcotics and

antispasmodics; or permanent, as tonics and astringents: 2nd, *Local Stimulants*, such as emetics, cathartics, expectorants, &c.: 3rd, *Chemical Remedies*, such as refrigerants, escharotics, &c.: 4th, *Mechanical Remedies*, such as anthelmintics, demulcents, &c.

Dr. A. Thompson takes as his three principal divisions, *Animal*, *Vegetable*, and *Chemical* agents. Into the particulars of the various subdivisions we need not enter, enough having been stated on this head for all present purposes. See *Medicines*.

MATICO. A name applied to the leaves of the *Arbanthe Elongata*, a plant of the pepper tribe, a native of South America, which has been recently introduced in English medical practice as an astringent styptic. It is recommended in chronic



dysentery and diarrhoea, given in the form of Infusion of the leaves, the under sides of which, or the powder, applied to obstinate leech bites, cuts, or bleeding surfaces, will, it is said, arrest the flow of blood. The Tincture, mixed with water, forms a good astringent lotion for the mouth. The dose of the Powder is from 10 to 30 grains; of the Infusion, prepared by pouring a pint of boiling Water on 1 ounce of bruised Leaves, 1 ounce; it may be taken three or four times a day; the Tincture is made with 2 ounces of bruised Leaves to a pint of proof Spirit; the dose of this is from 1 to 2 drachms.

MATLOCK. The waters of this small Derbyshire town pleasantly situated amid woody slopes and limestone rocks, on the river Derwent, contain no amount of saline ingredients sufficient to produce any physiological effects, and seem to have no action except as diluents; as such they may be recommended in cases where there is a

hereditary tendency to gravel; they have a temperature of about 68°, and are slightly impregnated with carbonic acid. See *Waters, Mineral*.

MATRASS. A vessel of glass, earthenware, or metal, usually of a globular shape, and open at the top, used for the purposes of digestion, evaporation, &c. A similar meaning is attached to *Alembic, Cucurbit*.

MATRICARIA (Latin, *matrix*). Medicines good in disorders of the uterus; the term is also applied to a genus of plants, some of which produce these medicines.

MATRIS (plural of *mater*, a mother). A name given to the membranes of the *Brain*, (which see), and *Dura Mater*.

MATRIX. The earthy or stony matter which accompanies and envelopes ores in the earth; it is also applied to the mould, in which a cast is made.

MATTER (Latin *materia*). The term generally used to denote any substances; they may be *Physical*, embracing the phenomena of the science of natural philosophy; or *Chemical*, illustrating the operations of affinity, combination, decomposition, &c., all which properly belong to the science of *Chemistry*.

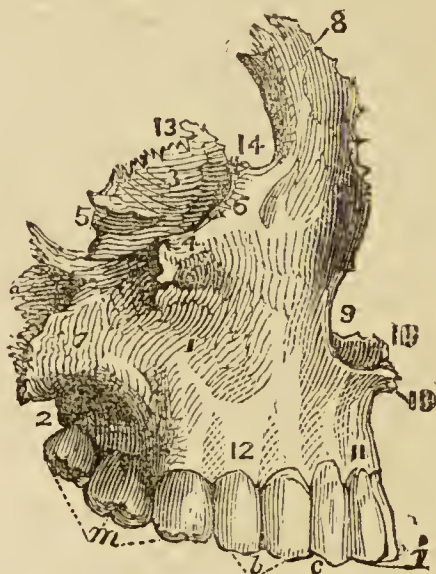
The term matter is also applied to the thick purulent substance collected in a boil, or *Abscess* (which see).

MATURATION (Latin *maturo*, to ripen). The process which follows inflammation, by which pus is formed in an abscess or other inflammatory swelling. Applications, such as warm poultices, which promote suppuration, are sometimes called *Maturants*.

MAW-WORM. The *Ascaris vermicularis* one of the intestinal worms, whose common name is derived, according to Dr. Harvey, from the occasional visit which the animal makes in migrating from its proper region, the rectum, to the maw or stomach; more probably, however, the peculiar effects which it produces are the result of sympathy, the gnawing pain and faintness being caused by the intolerable itching which it excites in the anus. See *Worms*.

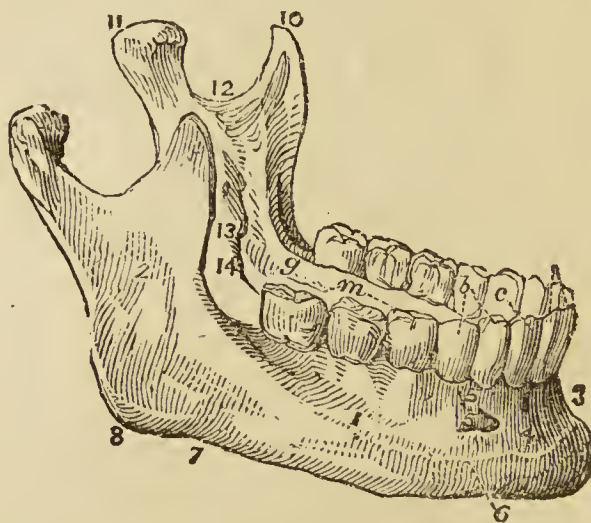
MAXILLA. The jaw; hence we have the term *Maxillary*, the designation of nerves, &c., belonging to the jaw. The upper, or, as they are generally called, the superior Maxillary bones, are the largest bones in the face, with the exception of the inferior Maxillary or lower jawbone; they form, by their union, the whole of the upper jaw, and assist in the construction of the nose, orbit, cheek, and palate. We give here a cut, exhibiting the right side of the superior Maxillary, as seen in its lateral aspect; 1 is the external or facial surface, the cavity in

which the cypher is placed is the *canine fossa*; 2 is the posterior or zygomatic surface; 3 the superior or orbital surface; situated immediately below the cypher is the infra-orbital foramen, 4; and leading to it is the infra-orbital canal, 5; the inferior border of the orbit is marked by 6; and the



malar and nasal processes by 7 and 8, while 9 is the concavity forming the lateral boundary of the anterior nares; 10 is the nasal spine; 11 the incisive or myrtiform fossa; 12 the alveolar process; 13 the interior border of the orbital surface, which articulates with the ethmoid and palate bones; 14 is the concavity which articulates with the lachrymal bone, and forms the commencement of the nasal duct; 15 is the crista nasalis of the palate process; *i* marks the two incisor teeth; *c* canine; *b* the two bicuspidati; *m* the three molars.

Our next cut represents the lower jaw, or inferior Maxillary, which is divisible into a



horizontal portion or body (1), and a perpendicular portion or ramus; 2, the symphysis; 3, indicates the point of conjunction between

the two lateral halves of the bone in the young subject; immediately external to this ridge is a depression in which originates the *depressor labii inferioris* muscle; 4, the mental foramen is marked by 5, this is an oblique opening for the exit of the mental nerve and inferior dental artery; 6 is an external oblique ridge, which runs upward, and outward to the base of the coronoid process, and gives attachment to several muscles; 7 is the groove for the facial artery, the situation of which is marked by a notch on the bone, a little in front of the ciphers; 8 is the angle, and 9 the extremity of the mylohyoidean ridge, which gives attachment to several muscles; 10 is the coronoid process; 11 the condyle; 12 the sigmoid notch; 13 the inferior dental foramen; 14 the mylohyoidean groove; 15 the alveolar process; *i* marks the middle and lateral incisor tooth of one side; *c* canine tooth; *b* two bicuspid; *m* three molars.

The muscles of the jaws, as might be supposed from the work they have to do, are strong and numerous; the action of the lower jaw is effected by the attachment of 14 pairs, and of the upper by that of 10 muscles; many nerves, arteries, and veins are also connected with them, of which it would be useless for us to attempt a description. The jaws are liable to *Fracture* and *Dislocation*, (both of which heads see,) and also to some painful affections, especially of the nerves. See *Neuralgia*, *Tic Doloieux*, *Teeth*.

MAY APPLE. This is the *Podophyllum*



Peltatum of botanists, called by the Americans the Wild Lemon. It belongs to the Crow-

foot family, natural order *Ranunculaceæ*; it is said to be poisonous, but the fruit, which has a subacid, sweetish taste, may be eaten with impunity; the root is a certain and active cathartic, resembling jalap in its operation, but rather slower, and perhaps more drastic. It is much used in America, combined with Calomel, in bilious fevers, and congestion of the liver.

MAXIMUM (Latin, superlative of *magnus*, great). A term which denotes the greatest possible quantity or effect; thus we say a Maximum dose of any remedy, the Maximum height of a fever or other disease. The term is opposed to *minimum* or the least possible; between the two lies the *medium*, the mean or middle.

MEAD, or METHEGLIN. This was the favourite beverage of the ancient Scandinavian nations, it was made of honey and water, boiled and fermented; in old medical works it is sometimes called *Hydromel vinosum*. Mead is by no means banished from the list of modern beverages, although only old-fashioned people now make or take it. One mode of preparation is as follows:—To a gallon of Water add 2 pounds of Honey, and 1 pound of Sugar, let it boil for an hour, then add the whites of 4 Eggs to raise the scum, which skim off as it rises; when quite clear pour it into an open vessel, and let it stand for a week, adding a toast dipped in Honey to make it work; put in also the peel of 3 or 4 Lemons; let it stand for a month, and then, if it is not sufficiently fine, put in more Honey and let it stand until it is, then bottle it for use. Some who prefer Mead with an aromatic flavour, add Cinnamon, Cloves, Cardamoms, or Fragrant herbs, according to taste; thus we have Cowslip Mead, Frontiniac Mead, Sack Mead, &c. These beverages are pleasant to many, and are not unwholesome.

MEAL. The edible part of barley, oats, rye, wheat, or other grain. See *Farina*.

MEALS. The tendency of the present age is towards late Meals; and especially is this the case with the higher classes of society: the morning Meal of our ancestors, like that of the ancient Greeks, was taken very early, commonly soon after sunrise; with us it is more commonly getting towards noon before the fast is broken, but this is with people who lie late abed. Those who are astir in good time feel the want of food, and generally take it by 7 or 8 o'clock; the latter is a very fit time for breakfast, before which Meal no great amount of exercise should be taken, unless the stomach be stayed, as it is termed, with a biscuit, or some light refreshment of the kind. It is never desirable

for invalids to make this first meal of the day a very hearty one, although those in good health, who take plenty of exercise, may do so with impunity, if not with advantage. It is a fallacious, although a very prevalent notion, that the powers of the body are the most vigorous at rising from rest; they are, doubtless, refreshed and recruited, but they have not yet come into full operation, and no weakly person can safely venture to tax them much until food is taken, and with it some gentle stimulus like Tea or Coffee. It speaks well for the health of any person if he can take a hearty breakfast and go about his ordinary occupation without pain or inconvenience; those who are not hearty and vigorous, even if they have an appetite for a full Meal, will suffer for want of the nervous power which would enable them to digest it comfortably; to such, therefore, and especially if they have active duties to perform, a light breakfast is best. With dyspeptic patients almost any solid food at the morning Meal will be likely to disagree; such will generally find it beneficial to have a small cup of hot Tea or Coffee brought to them just before rising, and then take their breakfast about an hour after, with only gentle exercise between. Grown persons generally require a stimulus at breakfast, such as Tea or Coffee, but for children Bread and Milk is best; or, if they are strong and hearty, Oatmeal Porridge, the common morning diet in Scotland and our northern counties, is the best.

Of Luncheon, we have already spoken under its proper head; it should only be taken when the dinner is late, and always ought to be a light Meal. No time is so good for dinner for working people and children as 12 or 1 o'clock; this is the most substantial Meal of the day, and it should be taken when the bodily powers are in full vigour; after it a little rest is required, especially by those who are at all delicate, although the strong and robust may go on working immediately after dinner without inconvenience; with this Meal, if at any, a little Ale is required, or a glass of Wine, but we do not hold either to be necessary in ordinary cases of good health. Those, whose duties keep them actively employed until four or five o'clock, and terminate then for the day, do well to defer dining until these duties are over, and they can sit down and enjoy the Meal, especially if their occupation requires much head work; for it is well ascertained that active exercise of the mind greatly interferes with the digestive process. Later than six, dinner should never be taken, and during and after this

Meal mental labour should be refrained from as much as possible; it should be followed by cheerful conversation, light reading, music, or something which may divert the mind from the cares and anxieties of business; there can be no objection to a glass or two of wine at this Meal, but far too much is commonly taken, and the dishes are generally too rich and highly seasoned. The practice of having Coffee an hour or two after is a good one as a general rule; it stimulates and assists the digestive organs, and it refreshes the somewhat jaded mind; but it should not be taken too strong, nor too near to bedtime, or it will probably interfere with the night's repose. Some persons are accustomed to sleep an hour or two after dinner; those who are spare and weakly may safely do so, but it is not desirable for those of a full habit of body. The practice of taking bitters, or some alcoholic stimulant before this Meal, is most reprehensible; it is irritating and, in the end, exhausting to the digestion; a draught of cold Water is a much better preparation for the Meal, but only for the strong and vigorous. Persons of weak digestion sometimes take a dinner Pill as an appetizer and stimulant; the practice as a rule is bad, yet there are cases in which it acts beneficially, but as a temporary remedy merely; for such the following form may be recommended:— $\frac{1}{2}$ a drachm each of powdered Rhubarb and Extract of Gentian, 12 grains each of Powdered Capsicums and Carbonate of Soda; mix and make into 24 pills; take one or two half an hour before dinner.

Those who take dinner at about the middle of the day require a supper; but they commonly make this Meal too substantial. If the life is one of active physical exertion, two heavy Meals in the day will probably not be injurious; but those who have not much exercise, do wrong to make the supper a full meat Meal; they may feel no inconvenience from it for a time, but they will, no doubt, do so after awhile. Children should always have a light supper, if any at all, and on no account Ale nor any other stimulating drink with it. If thirsty, Water is the best, or a little Milk and Water, or a little thin Gruel or Porridge. Children should only have meat once a day, at their dinner, unless ordered to take it more frequently by the medical adviser. The routine of their Meals should be something like this:—Breakfast at 8, Dinner at 12 or 1, Tea at 4 or 5, Supper at 7, and bed an hour after. See *Diet, Digestion, Food, &c.*

MEASLES. This is a contagious eruption, commonly affecting children, and the same individual but once; it is the first genus of the order *Exanthemata* of Bateman, and in scientific medical works is commonly spoken of as *Rubeola*.

The first *symptoms* of Measles: re shivering, succeeded by heat, thirst, and languor; then follows running at the nose, sneezing, cough; the eyes water and become intolerant of light; the pulse quickens, the face swells; there are successive heats and chills, and all the usual signs of catarrhal fever. Sometimes the symptoms are so mild as to be scarcely noticeable, sometimes greatly aggravated; but in any case, at the end of the third day, or a little later, an eruption of a dusky red colour appears, first on the forehead and face, and then gradually over the whole body. In the early stage of this eruption, there is little to characterize it, but after a few hours it assumes the peculiar appearance which once seen can never be mistaken; the little red spots become grouped, as it were, into crescent-shaped patches, which are slightly elevated above the surface, the surrounding skin retaining its natural colour. On the third day of the eruption it begins to fade and disappear, being succeeded by a scurfy disorganisation of the cuticle, which is accompanied by an intolerable itching. The febrile symptoms also abate, and very quickly leave the patient altogether; but often in a very weak state, and with a troublesome cough. Between exposure to the infection and the breaking out of Measles, there is usually an interval of 14 days, which is called the period of incubation; so that it is not uncommon, where there are several children in a family, for the cases to succeed each other at fortnightly intervals.

This disease is often rendered dangerous by complications with others; so that, although not in itself of a fatal character, it frequently leads to fatal results. Where there are the seeds of consumption or scrofula in the constitution, they are likely to be called into activity during the debility which follows an attack of Measles; dropsy often follows it, as do affections of the air passages, chest, and bowels.

Treatment. Generally speaking, for simple Measles, little medicine is required; give the patient plenty of diluent drinks; let him have a spare diet, and a moderately warm and well-ventilated room; keep the bowels gently open; if a roasted apple, or a little Manna in the drink will not do this, give a mild saline aperient, something like this:—*Ipecacuanha* Wine and Sweet Spirits

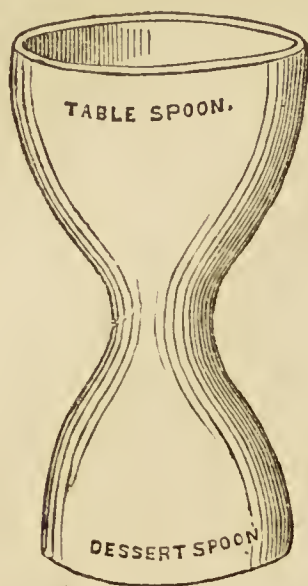
of Nitre, of each 1 drachm; Tartrate of Potash 4 drachms; Solution of Acetate of Ammonia, 1 ounce; Syrup of Poppies, 2 drachms; Cinnamon or Dill Water sufficient to make 4 ounces; dose, a table, or dessert spoonful, three or four times a day; should this not be sufficiently powerful, substitute Sulphate of Magnesia for the Potash, and add 4 drachms of Tincture of Senna. Where there is much heat of the skin, sponging with tepid vinegar and water will commonly relieve it, and also the itching. When the eruption has subsided, and the desquamation of the skin commenced, a tepid bath will materially assist this process, and get rid of the dead cuticle. On the third or fourth day after the subsidence of the eruption, a Powder of Calomel, with Rhubarb, Jalap, or Scammony, according to the habit and strength of the patient, should be given; care should be taken to protect the patient against change of weather, and to restore the strength by a nourishing diet. Attention should be paid to the cough, and the proper remedies given if required.

Sometimes the eruption of Measles disappears suddenly, then there is cause for alarm; the patient should be directly put into a warm bath, and have warm diluent drinks; if the pulse sinks rapidly, and there is great prostration of strength, administer Wine Whey and the following draughts:—10 drops of Aromatic Spirits of Ammonia, or 5 grains of the Sesqui-carbonate in $\frac{1}{2}$ an ounce of Camphor Mixture, with a drop of Laudanum, every four hours; should the prostration be very great, weak Brandy and Water may be given. The state of the chest, head, and bowels, should be closely watched, for some time after the patient is convalescent, as disorders of these organs are very likely to occur; in which case it is probable that there may be *Pneumonia*, *Hydrocephalus*, or *Diarrhoea* (all of which see).

Malignant Measles. Is a variety which commences with the above symptoms in an aggravated form; the rash quickly assumes a livid hue, alternately reviving and disappearing, and is mixed up with dark red spots like flea-bites; in this form of the disease we have extreme debility, and all the symptoms of putrid fever, like which it should be treated. No time should be lost in procuring medical aid.

MEASURES. A description of those used in the preparation and administration of medicines, is given under the head of *Apothecaries*. Besides the measures of capacity there figured, we would here mention and recommend one made of porcelain, which has been recently introduced, and

will be found useful for domestic purposes. A glance at the accompanying diagram will



explain its nature; it is a kind of double cup, which may be used either side upwards, as required.

MEAT. The flesh of the various animals used as food is generally so called. Under the several heads of Beef, Mutton, Pork, Veal, &c., we have spoken of the different kinds in relation to their nutritive qualities, and the best modes of preparation for *Food* (which see).

MEATUS. (*Meo* to pass or flow.) Literally a passage; hence the surgical terms *M. auditorius externus* and *internus*, applied to two passages of the *Ear* (which see) and *M. urinarius*, the orifice of the female *Urethra* (which see).

MECHANICAL THEORY. A system of medicine now exploded, in which all diseases were treated on the supposition that they were attributable to lentor and morbid viscosity of the blood; diluents or attenuants were therefore chiefly employed, and substances for promoting mechanical force, such as Mercury, which was supposed to act by its specific gravity.

MECONIUM (Greek *mekon*, a poppy). The inspissated juice of the poppy, or *Opium* (which see). The term is also applied to the first discharge of fæces, of a blackish-green colour, in infants. *Meconic Acid* is a constituent of the poppy juice; its salts are termed *Meconates*. See *Poppy*.

MEDIAS. Latin for middle; hence we have the surgical terms *mediana vena*, the middle vein of the arm between the basilic and cephalic. *Mediastinum*, middle portions, or those which separate parts from each other; the term is often used as an adjective, *mediastinal*.

MEDICINE (Latin *medico*, to cure). This may signify, either the art of curing diseases; or the substances used in their treatment, for producing certain changes in the animal functions. We have already spoken under the head of *Materia Medica*, of the division of Medicines into different classes, according to their nature or mode of action; it beloves us now to lay down a few simple rules with regard to their administration, and the kinds which are most likely to be serviceable for domestic use. We all know how difficult it is, with children especially, to overcome the disgust occasioned by the nauseous taste of most Medicines; this often amounts to such utter loathing, that the remedy, if it can be swallowed, is rejected by the stomach, and thus cannot prove effective. It is, therefore, desirable to render Medicines as palatable and pleasant as possible, and to administer them at such times, and with such precautions as shall render their retention and action most probable; for adults, who can swallow Pills, this is the easiest and best mode of taking such remedies as will go in a small compass, as the various forms of Mercury, and most of the stronger purgatives will. For children generally they are unsuitable; and Draughts or Powders must be given to them, unless, as is now often the case, Medicated Cakes, or Lozenges, containing the remedies, which their cases require, can be procured.

The best vehicle for children's Powders which contain any preparation of Mercury is Sugar moistened just a little, or Honey, Treacle, or Gum; it must be some thick substance, or the Mercury will fall to the bottom, and so not be taken. Powders with Rhubarb, Magnesia, or any light substance, may be mixed up thin and drank; a piece of Sugar, with a few drops of Essence of Peppermint on it, or a strong Peppermint Lozenge will get rid of the unpleasant taste perhaps sooner than anything else; those who object to this, should chew a piece of dried Orange Peel both before and after swallowing the Medicine. Aperients are best taken on an empty stomach, so are Vermifuges; Tonics should be taken an hour or so before meals, except preparations of Iron, which are best an hour after meals; Mercurials should always be taken at bedtime, unless the case is one which renders it desirable that an active remedy should be instantly applied. Emetics are commonly directed to be taken in the evening, because, after their operation, the patient may rest awhile. Stimulants, of course, may be taken at any time when required; opiates always at bedtime, that

their action may not be interrupted; unless it be a case of spasm or violent pain which calls for immediate relief. Strong Purgatives are best taken in the morning; at night they would disturb the rest, and cause great inconvenience. All these, of course, are but general rules, to which there are numerous exceptions. The discreet mother or nurse will know when they are to be strictly followed, and when departed from.

MEDICINE CHEST. Every one who desires to keep a stock of medicines for domestic use, should take care that it is in a secure place, and under lock and key; and, by no means can this be so conveniently effected, as by the purchase of a Medicine Chest properly fitted for the purpose. One of these can now be obtained at no great cost, with all the drugs and preparations, as well as instruments and apparatus required. The price of course will depend upon the size, style, and mode of fitment; but a very good one may be purchased for about £2; one for the use of Emigrants, made of japanned tin, calculated to resist the attacks of insects, and the effects of heat in a warm climate, has been prepared, and may be had stocked, for 30s., but is scarcely sufficient for the requirements of a family; and one of mahogany, or other strong wood, neatly made and fitted, will cost, at least, double this. The drugs and preparations which are most essential for this purpose are Aloes and Burnt Alum, both in powder; Ammonia, the Compound Spirit, and Acetate, or Spirit of Mindererus; Antimony, the Tartrate, and James's Powder; Cantharides, in the form of Common Blister Plaister, or Blistering Tissue; Castor Oil; Chalk, Prepared; Camomile Flowers; Chlorine, Chloride of Lime, in Powder, or Beaufoy's Solution; Cream of Tartar; Creosote; Copper, Sulphate; Dill, Water or Essence; Gentian and Ginger Roots; Henbane, Extraet; Ipecacuanha, in Powder; Iron, Sulphate, and Muriated Tincture of; Lead, Acetate, or Sugar of; Magnesia, Calcined, and Sulphate, or Epsom Salts; Mercury, Chloride of, or Calomel; Mustard, Flour; Opium, in Powder; Pills, Compound Coloeynth; the same with Calomel; the same with Hydrargyrum, or Blue Pill; which should also be kept separate; Compound Rhubarb, and Expectorant; Potash, Bi-carbonate of; Nitrate of, or Saltpetre; Powders, Compound; Chalk with Opium, and Dover's Powder; Rhubarb, Root, Powder, and Tincture; Scammony Powder; Senna Leaves; Silver, Nitrate of, or Lunar Caustic, in quill, or gutta-pereha holder;

Soda, Bi-carbonate of; Spirit of Sweet Nitre; Sulphuric Acid, or Oil of Vitriol, diluted; Zinc, Sulphate of, or White Vitriol. Scales with Weights; an Ounce and a Minim Measure; a Pestle and Mortar; Bone and Iron Spatulas will also be required, with Diachylon Plaister, Lint, Bandages; and as many of the *Instruments* named under that head as can be procured, are also desirable additions to the store.

MEDULLA. Latin for *Marrow* (which see). From this root come *Medulla oblongata*, a portion of the *Brain* (which see). *M. spinalis*, the spinal marrow, or cord. (See *Spine*). *Medullary*, the white substance of the brain, contained within the eortical, or cineritious substance, so called from its resemblance to marrow, on which account also the name *medullin* has been given to the porous pith of the sunflower.

MEGRIM. This term is probably a corruption of the Greek root *hemisrania*, through the French *megruine*, applied to a neuralgic pain in the side of the head; it is usually the result of debility; it sometimes may be relieved by a warm fomentation of the part, but to effect any permanent relief, tonics, and a nourishing diet must be had recourse to.

MEIBOMIAN GLANDS. These are small glands first discovered by Meibomius, lying under the inner membrane of the eyelids. About twenty or thirty minute ducts of these glands open upon the tarsus of each eyelid; the glands are sometimes called *ciliary follicles*. See *Eye*.

MEL. Latin for *Honey* (which see). It is employed as a vehicle for several medical preparations, which are collectively termed *Mellitæ*. Among them are *Mel. Boracis*, and *Mel. Rosæ* (Honey of *Borax* and *Roses*) (see these heads).

MELÆNA. This is the *morbus niger*, or Black disease of the ancients, sometimes called Black jaundice; it is characterized by dark-coloured, pitchy evacuations, generally accompanied by sanguineous vomiting; we sometimes hear of it as *Melæna cholæa*, or *M. eruenta*, meaning Black jaundice or vomit. Hoffman termed it *Cecusus niger*. See *Bile*.

MELAMPIDIUM. A name given by the Greeks to the Black Hellebore, from Melampus, who is said to have cured the daughter of Prætus, King of Argos, of melancholy, by means of this plant. See *Hellebore*.

MELANCHOLIA (Greek for black bile or choler) signifying melancholy, or mental dejection. This is a form of madness; it has been divided by some psychologists into four distinct varieties, viz.:—1. *Attonita*,

gloomy and retiring; 2. *Errabunda*, restless, roving; 3. *Malevolens*, mischievous, morose, &c.; 4. *Complacens*, self-complacent, affable, &c. (See *Insanity, Lunacy, Mania*.)

Under the head of *Temperament* we shall speak of the *melancholic* as a predisposing cause of sickness; at present it will be sufficient for us to observe that a habitual state of melancholy and despondence is a most unfavourable one for resisting the attacks of disease, and it behoves every one who finds such a state of mind coming on to use every possible effort to shake off the depression. Melancholy when extreme, and of long continuance, amounts to a disease, and commonly runs into at least partial insanity. Cullen says it is this without dyspepsia. By others it is defined as mental alienation, restrained to a single object or train of ideas. See *Monomania*.

MELALEUCA LEUCADENDRON. A tree of the natural order *Myrtaceæ*, a native of the



Moluccas, yielding the *Cajeput Oil* (which see), we give a cut of this plant.

MELANOSIS, or MELANOMA. A morbid product of a dark brown or black colour, described by Laennec; *Melas* itself was a term applied by the ancients to a superficial affection, resembling the *alphos*, or white lepra, except in its colour; it is synonymous with the *Lepranigricans*, (see *Leprosy*.) *Melasma* was the name given by Linnæus and others to the *Ecthyma luridum*, or *Lurid Papulous Scall*, (which see). *Melasic acid* is an acid present in *melases*, or molasses, commonly called treacle; by some it is considered as a peculiar acid; by others but a modification of the acetic.

MELAS (Greek for black). From this root we have, in addition to those above given, several medical terms, such as *melanic acid*, which is the name given to a principle discovered by Dr. Marcet in black wine; it is apparently connected with lithic acid.

MELANÆMA (Greek for black blood). A name given by Dr. Godwin, to asphyxia, from the colour of the blood in this affection. See *Asphyxia*.

MELICERIS (Greek *meli*, honey, and *keros*, wax). A tumour of the encysted kind, filled with a substance resembling wax or honey in consistency. See *Tumours*.

MELISSA OFFICINALIS. The name of a plant used in febrile diseases. See *Balm*.

MELILOT. A plant of the natural order *Leguminifera*, called by botanists *Melilotus Officinalis*; it grows wild in the English hedges and field borders; the flower has a peculiar odour, like that of the Tonquin bean, which is strongest when dry; it is employed to impart the characteristic flavour to the Gruyere cheese of Germany, called *schabziger*, or scraped cheese; the whole plant has a bitterish taste, but is eaten by cattle, and



was formerly employed medicinally as an emollient and digestive, in the form of fomentations and cataplasms. Up to a very recent period, an ointment of Green Melilot was sold by the druggists. This plant is prolific of honey, and is excellent pasturage for bees, hence the Latin name, from *mel*.

MELLITIC ACID. An acid discovered in

the mellite or honey-stone; properly the native mellate of alumina, the salts of which are called mellates.

MELON. This delicious but indigestible fruit, is the product of the *Cucumis Melo* of botanists; it belongs to the natural order *Cucurbitaceæ*, and is a native of the West Indies, whence it has been recently exported to this country in such large quantities, as to be sold at the low rate of one penny per slice; but very commonly before it passes out of the hands of the vendor, the fruit is in a state of partial decomposition, and is more unwholesome than when quite fresh; in its best condition we would not recommend it to persons of weak digestive organs.

MELTING POINT. That degree of heat at which a solid becomes a fluid. The following table exhibits the comparative temperatures (Fahrenheit) at which some of the principal substances known to us melt:—Ice at 30°; phosphorus, 90°; spermaceti, 112°; potassium, 150°; sodium, 190°; sulphur, 218°; camphor, 303°; lead, 612°; zinc, 680°; silver, 4,717°; gold, 5,237°.

MEMBRANE. (Latin *membrana*). A membrane is sometimes a bag for containing fluids, sometimes a thin substance lining a cavity; it consists of concrete gelatine, and like skin, may be changed into leather by tanning. The membranes of the body are divided by anatomists into 1st, the *mucous*, which invest the sides of cavities communicating with the external air, such as the throat. 2nd, *serous*, lining cavities, which are not externally open; 3rd, *cellular* membrane, or areolar tissue, which connects the minute component parts of most of the structures of the body; 4th, *fibrous* membranes, which are of various forms, constituting capsules, sheathes, &c. Then there are peculiar membranes, which do not belong to either of these classes, such as *M. nictitans* (Latin *nicto*, to wink), with which birds can occasionally cover their eyes; *M. pupillares*, which extends across the pupil of the eye in the foetus; *M. tympani*, which extends over the circular opening of the ear, forming what is called the drum, or tympanum; *M. pituaria*, which lines the cavities of the nose.

By the term Membrane, then, as used in anatomy, we must understand a thin wide layer, or an expansion of tissue; its office is to protect and envelope all the more tender parts of the body; in its thinnest and purest state, which is that of a mere pellicle, in which no trace of structure can be detected, even when submitted to the highest power of the microscope, it is termed primary, or basement membrane, but it is

more commonly constituted either of flat cells, or interlaced fibres, thus, the surface of the serous and mucous Membranes are spread over with layers of minute cells, which are adapted to the functions of the particular organs which they cover; these layers which resemble the epidermis, or cuticle, which is spread over the skin, we term the *epithelium* of the Membrane.

These tissues, like all other substances of the animal body, are liable to a variety of affections, but they are most affected by those of an inflammatory nature; thus we have *pleuritis*, inflammation of the pleura, or Membrane which covers the lungs; *pericarditis*, inflammation of the pericardium, or investing Membrane of the heart, and other diseases of the kind which we need not particularize, as they are all mentioned under special heads.

MEMORY. This remarkable power of the human mind to store up, as it were, scenes and events, and recall them at will, appears to be one which, in this life at least, is never wholly lost; for although sometimes it appears to be so—although from age, or other circumstances, it becomes defective, and words and things seen and heard but a few days before, cannot be recalled, yet we well know that in certain states of mind and conditions of the system, and especially of the brain, the Memory of long forgotten events come up as freshly and vividly, as if they had but just occurred, showing that the power of recalling them had but been in abeyance for a time. Entire or partial loss of Memory, unless it can be accounted for by age, should always be looked upon with suspicion, as indicative of incipient cerebral disorder, which may lead to insanity. Like all other powers of the mind, Memory may be improved by exercise, and those with whom it is defective should make great efforts to remedy the defect, by habitual practice.

MENDOSUS (Latin *mendax*, false). Hence *Mendosæ costæ*, the false rib; *M. suturæ*, the bastard or squamous suture of the cranium.

MENINGES (plural of the Greek *meninx*, a membrane). A name applied to the dura and pia mater. (See *Brain*). From the same root we have *menyngitis*, inflammation of the membranes of the brain and spinal marrow. (See *Encephalitis* and *Myelitis*.) An instrument formerly used to protect the brain from injury during the operation of trepanning, was termed a *meningophylax*.

MENORRHAGIA (Greek *menos*, a month, and *megnyri*, to break forth). A morbidly profuse discharge of the *Cutamenia*, sometimes called *Amenorrhæa* (which see).

MENOSTATION (Greek *menos*, menses, and *istemi* to stand). A suppression, or retention of the catamenial discharge. See *Menstruration*.

MENISPERMUM. Is the name of a genus of plants, to which the species which yields the Columba root was formerly said to belong; it was called *Menispermum cocculus*, and an acid obtained from its seeds was known as *Menispermic acid*. The plant is now termed *Cocculus Palmatus*. See *Calumba*.

MENSTRUATION (Latin *menses*, a month). The functions of the uterus, by which the menstrual, catamenial, or monthly discharges take place; these generally commence between the fourteenth and sixteenth years of age, although we have known them to begin as early as eleven or twelve; a considerable period may elapse between the appearance of the first and second menstrual discharge; but, when they are properly established, their recurrence, at regular periods, may be calculated on with great certainty, unless some functional or other derangement of the system interferes with them. Ordinarily a lunar month of 28 days is the intervening period, but with some females, the discharge occurs every third week; the fluid discharged resembles blood in colour, but it does not coagulate; the quantity is from 3 to 5 ounces, and the process occupies from 3 to 5 days. The quantity, however, and duration of the emission varies greatly in different females, and unless the former is either very scanty or excessive, these do not appear important particulars; but the regular recurrence of the issue is important to health; this should be borne in mind, and due care taken not to suppress the discharge by exposure to cold or wet, or by violent exertion of any kind about the time when it may be expected. It is desirable that young females should be properly informed by their mothers, or those under whose care they are placed, of what may be expected at a certain age, or they may be alarmed at the first appearance of the Menses, taking it to be some indication of a dangerous disease or injury, and, perhaps, by mental agitation, or a resort to strong medicines, do mischief to themselves. If the Menses do not appear at the usual age, or for some years after, no alarm need be felt, provided there is no constitutional derangements which can be attributed to this cause. Some women never menstruate, although they may be married and have a family. Most commonly with suppressed Menstruation, which we understand the term *Amenorrhœa* to signify,

there is, if not actual disease of the parts, more immediately involved in the process, a weakly and unhealthy state of the system; when there is such suppression, discharges of blood will sometimes occur from the nose, mouth, and gums, or from the stomach and bowels: nearly always there will be unnatural heats and flushings, head ache, tendency to faint, and hysterical symptoms. At the regular periods when the Menses ought to appear, there will be great excitability, and an aggravation of the above symptoms; with those of full habit, there will be a strong, bounding, pulse, with acute pain in the head, back, and limbs; with the feeble and sickly, extreme languor, tremblings, shiverings, and pale visage.

In the first case, the *treatment* will be spare diet, free purging with saline aperients, cupping in the loins, and vigorous exercise between the periods; in the second, nutritious diet, with Wine or bitter Ale; tonic medicines—some form of Iron is the best, in combination with Quinine; gentle aperients, such as Castor Oil, or Compound Rhubarb Pill, and the use of the Hip-bath, the latter especially for a few days before the menstruating period; every other night the bath should be made more stimulant by the addition of a little Mustard, and, on every occasion, active friction with dry coarse towels should be used; a lavement, containing 2 drachms of Spirit of Turpentine, may also be useful; and a leech or two applied to each thigh, on the upper part, as near to the situation of the uterus as may be. All this should be done in a case of *acute suppression*, that is, where the secretion of the Menses has taken place, but derangement of the general health, or perhaps some mechanical obstacle prevents its appearance; if the latter is the case, of course, surgical aid is necessary. *Chronic suppression* may result from the acute, or from defective nutrition of the organs; from the early termination of menstrual functions, or from the weakness occasioned by a profuse discharge of "whites" from the uterus. In this case we generally have pains in the head, sides, and back, loss of appetite, giddiness, sallow complexion, with a dark line round the eyes, generally torpid bowels, with other dyspeptic symptoms. It is sometimes difficult to distinguish between this and the early stage of pregnancy; in both we have a large abdomen, but in the latter usually the breasts are flat, in the former full and plump, but the doubt will not long remain; the morning sickness, the increasing size of the abdomen, and the other unmistakeable

signs of pregnancy, if it be that, will dissipate it in a month or so.

In a case of chronic suppression, if there be no indications of disease which call for special treatment, and if the age of the patient be such as to warrant a reasonable expectation that emmenagogue remedies may be of service, they should be resorted to. (See article on *Emmenagogues*.)

In this case, too, the warm Hip-bath should be used about the proper period of Menstruation, and it would be well to give some uterine stimulant, such as Ergot of Rye, of which about 5 grains, with 2 grains of Aloes, and a drop of Essential Oil of Juniper, made into 2 pills, or mixed up in a powder, would be about the dose to be taken each night at bed time, with a draught of Pennyroyal Water; or a mixture composed of Spirit of Turpentine, made into an emulsion with Yolk of Egg, Sugar, and Essence of Juniper, about 6 drachms of the first and 1 of the last, in a 6 ounce mixture; 1 ounce to be taken three times a day. These means of promoting the discharge in any case must not be prolonged much beyond the menstrual periods, between which all possible means must be taken to strengthen the system; good diet, plenty of active exercise, the use of the shower bath, or cold, or tepid sponging; Steel Mixture, with Aloes and Iodine, in one or other of its forms; these are the proper remedies.

When the Menstrual period comes round again, use the means above directed, and continue thus to alternate the treatment until success crown the efforts, or the case becomes altogether hopeless. If the Amenorrhœa proceeds from a want of energy in the uterine organs to secrete the red discharge, as is often the case after frequent miscarriages, child bearing, or inflammation of the womb, as well as after leucorrhœa, or "whites," there will probably be the usual signs of Menstruation, followed by a white discharge only, and accompanied by acute pain at the bottom of the back, vertigo, and hysteria. Weakly young women, before accession of the Menses, and elderly ones, at the time of their cessation, or "change of life," as it is commonly called, are often so affected. In such a case we should prescribe hot baths and tepid injections, pills of Sulphate of Iron and Aloes, with Balsam of Copaiba, 10 or 20 drops in milk, three times a day; or Powdered Cubebs, from a scruple to half a drachm; good diet, and a recumbent position as much as possible during the periods. If the patient is of a full habit, apply leeches, 10 or

12 over the sacrum, to be followed by a blister, with restricted diet, and, for a time, avoidance of sexual intercourse.

Sudden suppression of the Menses may arise from exposure to cold or wet, from extreme mental distress, and several other causes; it is generally accompanied by violent headache, severe pain in the loins and abdomen, difficulty of breathing, and shivering. In this case the patient must take warm diluent drinks, saline aperients, till the bowels are freely opened, have hot bran poultices applied to the lower part of the abdomen, immerse the feet and legs in hot water, rendered stimulant by the addition of Mustard; if the pain is extreme, take an opiate draught every four hours, and have a lavement, with 1 drachm of Turpentine, and $\frac{1}{2}$ a drachm of Tincture of Opium thrown up; she must also be kept as quiet as possible.

Painful Menstruation is the rule with some females, but the exception with most; it does not seem to be in any way connected with the quantity of the discharge, and it may attend both the secretion and the emission; or but one or other of the processes, and but partially, coming on in paroxysms, or continually, during the whole process; the matter discharged is often thick and membranous, and sometimes has in it clots and streaks of blood; the cause of this is not very clear; it has been observed to occur after strong mental emotions, a cold caught during the menstrual period, a fright or other shock to the system, and would seem to indicate an irritable state of the womb. In this case we must resort to warm hip baths and friction, fomentation of the parts, diluent drinks, saline aperients, opiates, and a spare diet; injection of warm water high up into the vagina, &c.

Profuse Menstruation consists either in the too frequent return, or too long continuance of the periods, or in an excess of quantity during the natural periods, or in the character of the discharge being other than it should be, such as thick, fibrous, or bloody. It is generally accompanied by pain across the loins, great languor and debility, throbbing of the temples, headache, and vertigo; when there is much hæmorrhage, there is an aggravation of these symptoms, sometimes followed by dropsy of the cellular tissue. This is in consequence of irritability of the uterine system, probably produced by over-exertion, luxurious living, with insufficient exercise, or excesses of any kind; too rapid child-bearing, frequent miscarriages, or protracted lactation.

The treatment in those of full habit,

where the Menses are not bloody, should be leeching or cupping in the loins, saline aperients, with Iron and Sulphuric Acid; this is a good form of preparation: Sulphate of Iron 12 grains, Dilute Sulphuric Acid 1 drachm, Sulphate of Magnesia 6 drachms, plain or Cinnamon Water 12 ounces; take 2 tablespoonsful three times a day. If there is much pain, add Tincture of Henbane, 2 drachms: or Compound Infusion of Roses may be taken, with Sulphate of Magnesia; or 10 or 15 drops of the Muriated Tincture of Iron in Water, with or without the Salts, as the bowels may require, two or three times a day. Sponge the loins and pubenda with vinegar and water, use the hip bath, but let it be cold water, with a little salt in it; to strengthen the system as much as possible, and avoid all enervating influences. If there is blood in the discharge, do not leech nor cup, unless it be dry cupping merely, which may be serviceable; use cold vaginal injections, with Alum and Opium in them, or the latter with Gallic Acid, about a drachm of each to a quart of water; apply hot bran poultices to the breasts. Keep the feet warm, but let the loins be lightly covered; take carriage exercise, bitter ale, and tonics, especially Iron.

Cessation of Menstruation. As the accession of the Menses shows when the womb is in a fit state for conception, so then, cessation gives notice that the period of child-bearing is past. Sarah, we may remember, when promised a child in her old age, was incredulous, because it had "ceased to be with her as with women;" those periodical signs of the activity of the organs of conception, of which we have here been speaking, had long since disappeared; with females of our age and country they commonly continue up to the age of from 40 to 50; sometimes they cease at about 35, and in a few instances have been known to continue up to the age of 60; this cessation marks what is commonly termed the turn or change of life in women, and with those of average health it occasions little or no disturbance of the general system; there may be flushings of the face, and a sense of fulness in the head, with occasional giddiness; but with those who are weakly and nervous, or suffering under any organic disease, we generally see a marked change at this period; it may be for the better or worse, according to circumstances. With most persons the stoppage of the Menses is a gradual process, the quantity decreases, or the intervals become protracted, and it is probably superseded by a white discharge, which also will by and bye disappear; with some the cessation is

sudden and complete. Women generally consider this an eventful period of their lives, and attribute all sorts of wonderful effects to it; but we cannot learn that a sickly constitution was ever renovated at this time, or ever broke down in consequence of the change; indeed, fewer women than men die at the age when it usually takes place. Diseases of the genital organs, and of the breasts, which are sympathetically associated with them, require especial attention at this time, as they are likely to be stimulated into activity. When there are no complications of disease connected with the change, little or no medical treatment is required; it is best to observe an abstemious diet, and to keep the bowels moderately open with Rhubarb or Colocynth pills; the Powdered Aloes with Canella, commonly called Hiera Piera is a popular opening medicine, and as good as any for such an occasion, except the patient be of a very full habit, in which case it should be a saline aperient like this: dissolve 2 ounces of Epsom Salts in a pint of Warm Water, add 1 drachm of Essence of Peppermint, take a wine glass full every morning, or twice a day if required; if there is flatulency or hysteria, add to each dose 20 drops of the Fœtid Spirits of Ammonia, or the same of Ether.

MENSTRUUM is a term synonymous with *solvent*; it is a liquid which does not change the nature of the substance to be dissolved. The old alchemists entertained the notion of a universal solvent, which they called by the arabic name *alkahest*, and by which wonders were to be effected, but, as far as we can ascertain, they never found out this universal Menstruum of miraculous powers and qualities. With us, the several Menstrua in which medical agents are held in solution, are usually denominated *vehicles of administration*.

MENSURATION (Latin *mensura*, a measure). In medical practice this term is applied to the admeasurement of the chest, for the purpose of ascertaining the comparative size of its two sides; it consists simply in measuring with a piece of tape stretched over the surface from one point to another. To measure the capacity of the lungs, the patient is caused to exhale a full breath through a bent tube communicating with an inverted jar containing water, the quantity of which displaced by the air shows how much of the latter the lungs will contain.

MENTHA. The scientific name of a genus of plants of the order *Labiata*, all of which yield volatile oils. See *Pennyroyal*, *Peppermint*, *Spearmint*.

MENTUM, Latin for the chin, hence to

nerves, &c., pertaining to this part we sometimes see the adjective *mental* applied.

MENYANTHES TRIFOLIATA. The scientific name of a plant, sometimes called Marsh Trefoil, but more commonly *Buck Bean*, (which see.) On account of its bitterness, says Dr. Parr, this plant is sometimes substituted for hops; the powdered Leaves in doses of 1 drachm are given to sheep to cure the rot.

MEPHITIS. The name of the heathen goddess of bad odours, hence the term is applied to an impure or poisonous exhalation. Carbonic acid gas, which occasions death if inhaled, has been called *Mephitic acid*; and nitrogen gas, also from its deadly nature, *Mephitic air*.

MERCURY, as every schoolboy knows, was the messenger of the gods, and we now apply his name to that metal called *Argentum vivum*, or quicksilver; why it is not easy to say. This metal differs from all others in being always fluid, unless subjected to a temperature of 39°, when it becomes solid; it is extensively used in medicine (see *Hydrargyrum*), and gives name to several forms of disease which are caused by its action on the system, thus we have *Mereurial erythema*, an affection which is characterized by irregular action of the heart, frequent sighing, trembling, &c.; also, *Mereurial rash*, a variety of the *Eczema rubrum*, arising from the irritation of Mercury; it is sometimes called *Erythema mereuriale*, and *Mereurial lepra*. See *Erythema* and *Skin Diseases*.

MEROCELE. (Greek *meros*, the thigh, *kele*, a tumour,) a name for femoral or crural *Hernia*, (which see.)

MESENTERY. (Greek *meros*, the middle, and *entera*, the bowels.) The broad fold of the peritoneum, or covering membrane of the bowels, by which the small intestines are attached to the spine, and retained in their place, is so called; the adjective of the term is *mesenteric*, from it we have *mesenteritis*, inflammation of the mesentery; *mesaraic* the small intestines; *mesocolon*, that part of the mesentery which is attached to the colon, its adjective is *mesocolic*; also, *mesorectum* and *mesocæcum*, that part of the peritoneum which is connected with the rectum, and that which embraces the cæcum and its appendix. See *Intestines*.

META (the Greek preposition after or with, it often stands for change,) from whence come the terms *Meta-carpus*, that part of the hand between the *carpus*, or wrist, and fingers; *Meta-tarsus*, that part of the foot between the *tarsus*, or instep, and toes; *Metamorphosis*, a change of vision; a kind of amaurosis in which objects appear

confused or disturbed, (see *Eye*); *Metastasis*, a removal from one place to another, a term applied to cases in which an affection of one part or organ is checked by the intervention of disease in some other; thus we have a cessation of rheumatism followed by pericarditis, &c.

METALS. A class of mineral substances on which, as all know, we depend greatly for the supply of our wants and necessities, of their use in the arts and sciences it is not within our province to dwell, except in so far as relates to medical science, and in this they perform an important part. Gold, silver, iron, copper, mercury, lead, tin, antimony, zinc, bismuth, arsenic, manganese, potassium, sodium, barium, strontium, calcium, aluminium, magnesium, these are the principal metals which, as the bases of alkaline salts, as acids or oxides, or in the pure state, are largely employed in the treatment of diseases, as they will each and all be found under their proper heads, we need not here speak of their several natures and properties. When found in an uncombined state, they are termed *native*; when combined with other bodies, *mineralized*; if the combination be with any other metal, except mercury, they are *alloys*, possessing the characteristic properties of pure metals; when the combination is with mercury, it is called an *Amalgam*, (which see.)

The result of the oxidization of metals when heated in the air, was formerly called a *calx* from the process *calcination*; when mixed with the nitrate and chlorate of potash, and projected into a red-hot crucible they are said to be *deflagrated*; they suffer *reduction* when the oxides are reduced to the metallic state. Metals are the best reflectors of caloric, or heat, and the worst radiators. Metals obtained from the fixed alkalies, or earths, were formerly called *metalloids*; we now speak of them as metallic earths, &c.

METEOROLOGY is compounded of two Greek words, signifying a description of Meteors, and it is applied to a study of the variable phenomena of the atmosphere, which are owing to the operations of *Heat*, *Light*, *Electricity*, &c., all these have considerable influence on the health of human beings, and, therefore, we deem it desirable that we should speak of them in this work. Under the above several heads, as well as those of *Air*, *Atmosphere*, *Gases*, *Temperature*, *Ventilation*, &c., will be found the special observations we have to make upon this subject, so that it will not be necessary for us to extend our remarks here.

METHODE NUMERIQUE. French for the

numerical method; a mode of pursuing the study of medicine, invented by M. Louis; it consists 1, of collecting, with a strict regard to accuracy, individual cases, and 2, in analysing and collating them, so as to be able to deduce general laws and conclusions. This principle is recognized, and, to a certain extent adopted, in all modern schools of medicine, although it is not made so fundamental a principle as the French physiologist would have it.

METHECIC SECT. A class of practitioners in ancient Rome, founded by the physician Themison, a disciple of Aselepiades, who attributed all diseases either to overbracing or relaxation: hence they classed all medicines under two heads, *bracing* and *relaxing* remedies; here again we have a theory founded on fact, only it was pushed too far; in modern practice its application is more limited, and it works well.

MEZEREON. *Daphne Mezereum* is the botanical name of this plant, which is a kind of spurge laurel, belonging to the



natural order *Thymilaceæ*; it is a native of Britain, and one of the greatest ornaments of the garden in spring; the blossoms, which are beautiful and fragrant, appearing before the leaves, which have an acrid, pep-

pery taste; the Russian peasantry take 30 or 40 of them as a purgative, and give them as an emetic to children with whooping cough; generally in this country 8 or 10 of them will cause purging. The Bark, both of the root and stem, is used medicinally, that of the former being most powerful. Taken internally it is a stimulant, having a tendency towards the side and kidneys; in over-doses it produces all the effects of a narcotic poison.

METOPSCOPY (Greek, *metopon*, the forehead, and *okopeo* to examine). The art of divining by inspection of the forehead practised among the Romans; modern diviners examine the lines of the hand, but we question if they give so good an indication of the character and fortune of the individual, as those which the toils, and troubles, and sorrows of life plough upon the forehead, looking on which, too, the seer, might read the expression of the whole face, and thus be greatly assisted in his guessing, for it could be nothing more after all.

METRA, Greek for the uterus, hence the terms *metritis*, inflammation of the uterus; and *metrorrhagia*, uterine hæmorrhage, and *metroscop*, an instrument designed for examining the uterus.

MIASMA (Greek *Miasmo*, to pollute). This is a term which is employed to designate a volatile principle, which exercises a deleterious influence on those exposed to its action, and which arises from decomposed animal or vegetable matter, from the bodies of the sick, or from the moist earth when exposed to the action of the sun. The term is seldom employed in reference to the morbid effects of contagious diseases, but is more commonly restricted to those of moist, marshy districts, in which sense it is the same as *Malaria*, (which see), also *Ague*, and *Remittent Fever*.

MICROCOSMIC SALT (Greek *mikros*, little, and *kosmos*, order). A triple salt, obtained by mixing equal parts of the phosphates of soda and of ammonia in solution, and then crystallizing. It is employed as a *flux* in experiments with the blow-pipe.

MICROGLOSSIA (Greek *mikros*, and *glossa*, the tongue). Congenital smallness of the tongue, owing, it is likely to an arrest of development, and the consequent existence of the hyoid, or root portion only of the organ; it is one of the causes of *Dysphagia*, or difficulty of *Swallowing*, (which see).

MICROSCOPE (Greek *mikros*, and *okopeo* to view). This is an optical instrument, consisting of lenses or mirrors, by which minute objects are magnified, and thus rendered visible, so that their texture and

structure can be examined. Into the particulars of construction of this useful instrument, we cannot here enter, our object being merely to allude to it as one of the greatest aids to modern medical scientific inquiry. By its assistance the urine, and other animal secretions can be closely examined, and their constituent elements determined. The exact character of tumours and other morbid growths, also, can be clearly ascertained by an application of the magnifying power of the Microscope; and many diseases, especially those of the skin, traced to their true origin. In medico-legal investigations, too, this instrument is rendering most important service, and sworn evidence can now be given upon spots, and stains, and other marks of crime, on which it would otherwise be impossible to found a decided opinion. In the detection of food-adulteration we likewise find the Microscope extremely serviceable; it is now clearly established as a fact, that every animal and vegetable substance has its peculiar structure, and no admixture of two or more of these can take place, but when subjected to the test of a high magnifying power, its detection is certain. See *Adulterations*.

MIDRIF. The common name of the muscle which divides the thorax, or chest, from the abdomen; its scientific name is *Diaphragm*, (which see).

MILK. This is the fluid secreted by the mammiferous animals for the sustenance of their young; it is the only fluid that we are acquainted with, throughout the whole range of organized Nature, prepared expressly and solely for such a purpose; and it contains within itself all that is most requisite to build up the frame of the living animal, and to keep it in health. In all animals it is characterised by certain general properties, but in each it possesses some peculiarities of composition which especially fit it for its intended purpose. When examined under the microscope, it is found to consist of minute spherical globules, which are suspended in a thin serous fluid; and the greater or less number of these globules constitutes the richness or otherwise of the Milk; this we shall show more clearly presently. Naturally, good Milk is thick and opaque, but when diluted with water the proportion of thin fluid is increased, the rich whiteness is destroyed, and the whole assumes a bluish and semi-transparent appearance. These globules chiefly consist of the oleaginous or fatty portion of the Milk, which we commonly call cream; having a less specific gravity than the fluid on which they float, they have a tendency to rise to

the top, and hence can be separated by skimming, especially if a slight degree of warmth be applied to the fluid; they may also be driven into closer union by a rotary or other motion, so as to become clotted together, and more or less solidified, in which case we have *Cheese* and *Butter*.

We have stated that the quality of Milk depends on the presence of the white globules to which its colour and opacity are due.

Skim Milk, Butter Milk, Cream, Butter, Curds and Whey, Cream-cheese, and ordinary Cheese, are mere modifications of Milk, differing only from each other, either in the abstraction of one or more of its constituents, or else in the variation of their proportions.

Butter differs little from cream, but is more completely separated from the sugar, cheese, and salts; and the fat globules in place of being free and distinct, have all run together, so as to form a semi-solid substance.

Cheese is made from skim Milk, entire Milk, or cream; it consists of the caseine and butter. The cheese prepared from skim Milk containing the smallest quantity of butter; that from entire Milk, as Cheshire cheese, a larger quantity; and that from cream, as Stilton cheese, the most of all.

Now, although the caseine and sugar of Milk, as well as the butter, vary in quantity in different cases, yet, ordinarily, the quality of Milk is estimated by the amount of cream which it yields.

For the determination of the quality of Milk, it is, however, requisite not only to ascertain the amount of cream which it yields, but also to take the specific gravity or density of the Milk.

In estimating the specific gravity of any liquid, distilled water is taken as the standard, being reckoned at 1,000. Now Milk, holding as it does in solution a large quantity of sugar, casein, and salts, is of course much heavier than water; and it is stated that Milk of good quality should have a specific gravity of about 1,031. But Milk, as we have seen, contains also a large proportion of fatty matter, and which, being much lighter than distilled water, serves when equally suspended through the fluid, to decrease its density. The larger therefore the quantity of cream, the lower will be the specific gravity—some Milks, owing to the large quantity of cream contained in them, possessing a density of only 1,020, or even less.

We have said that the butter is suspended

In Milk in the form of innumerable droplets of various sizes; in rich Milk, these are particularly abundant, so that when a drop of such Milk is viewed under an object-glass of high magnifying power, the field is crowded with myriads of these globules, as shown in fig. 1.

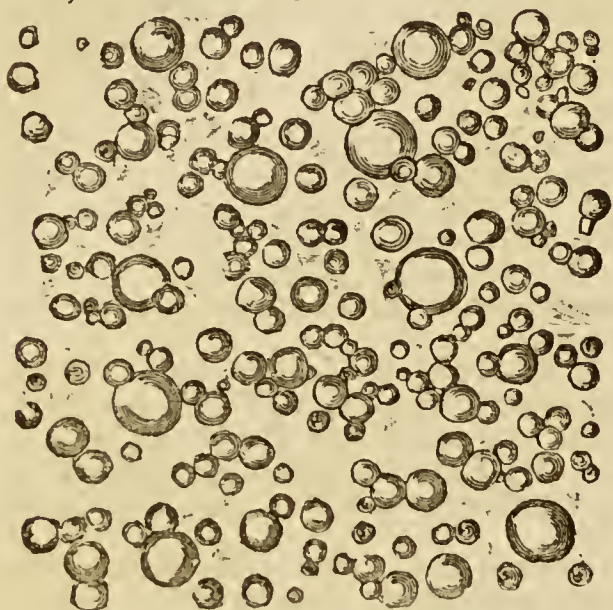


Fig. 1.—Good Milk.

In an impoverished Milk, the globules will be smaller in size and fewer, and the field of vision will present the appearance of fig. 2.

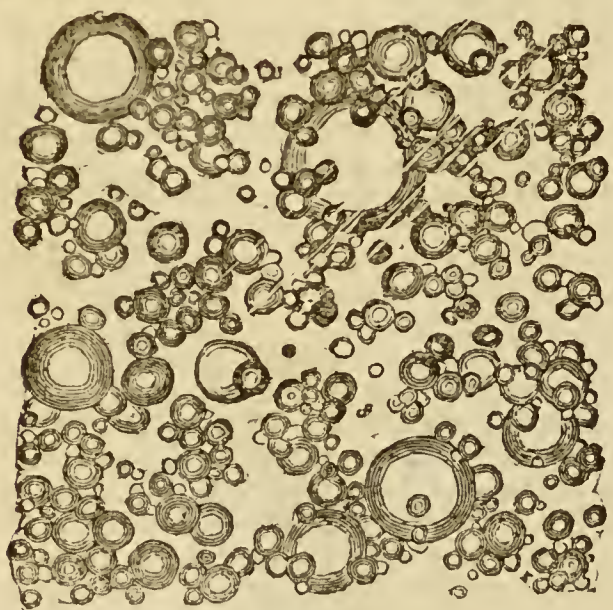


Fig. 2.—Poor Milk.

When curd of Milk is examined under the microscope, the butter is still seen as droplets of fat, and the cheese as a granular substance of a yellowish colour. See fig. 3.

Of all the articles of food, none is so much adulterated as Milk. We find different writers naming a variety of ingredients as commonly employed in the adulteration of it—amongst which may be mentioned *flour*,

milk of almonds, gum arabic, gum tragacanth, chalk, turmeric, carbonate of soda, sugar, emulsion of hemp-seed, and sheep and horses' brains, rubbed up with water into an emulsion.

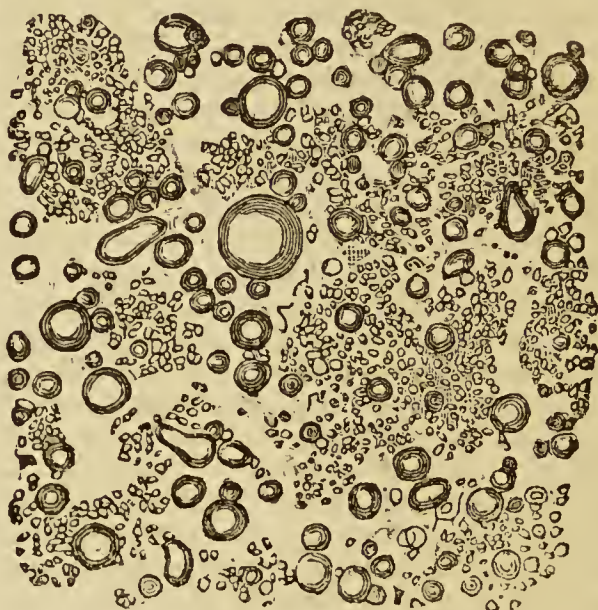


Fig. 3.—Curd of Milk.

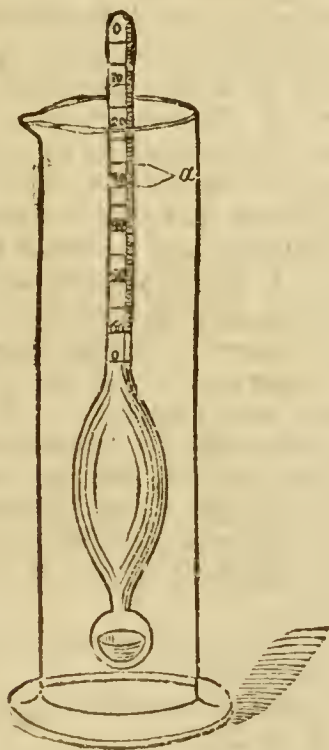
Chemical analysis shews that Milk is composed of the oily or fatty constituent, in the form of globules, called Cream, and Water, which holds in solution Curd or Caseine in combination with Salt, Phosphate of Lime and Magnesia, and a saccharine principle called Sugar of Milk, which latter ingredient is not present in the lacteal fluid of the purely carnivorous animals, but appears as soon as vegetable food is taken. In the Milk of the cow, we find that the caseous, oleaginous, and saccharine ingredients bear about an equal proportion; in human Milk, the two latter are proportionately greater than the former, or curd; consequently the Milk is less opaque and thinner than that of the cow, and more like that of the mare and ass.

The average specific gravity of fresh Milk is 1.030; it is alkaline, and as far as the unassisted vision can detect, perfectly homogenous; that is, its constituent elements are perfectly combined and consistent throughout; but after standing awhile, the light oily particles separate and float at the top then a process of fermentation is set up Acetic Acid is evolved, and souring or curdling takes place; this is the case much sooner in warm weather than in cold; by it Milk is rendered unfit for the purposes of nutrition, and therefore it should not be given to children when in this state. On Milk, as food for the young, we have already spoken under the head of *Infants*; we shall, therefore, now confine our remarks to this bland fluid as a general article of

diet, the adulterations to which it is subjected, and the modes by which these adulterations can be detected.

It is, perhaps, sufficiently well understood that the Milk of animals, and especially of those which feed much on vegetables, is highly nutritious; and yet, generally speaking, it will not do for invalids to live too exclusively upon it; its richness and tendency to curdle or coagulate, render it somewhat indigestible; there are, no doubt, many of our readers who never take a basin of Bread and Milk without having a head-ache, or continue it long without becoming bilious; this shows that it is too heavy for the stomach: a hearty labouring man may take plenty of Milk, as he may of fat pork, but with weakly persons, or those of sedentary habits, a Milk diet will not agree; it is pleasant and wholesome as an adjunct to other food, but must not, in such cases, be made a common article of diet.

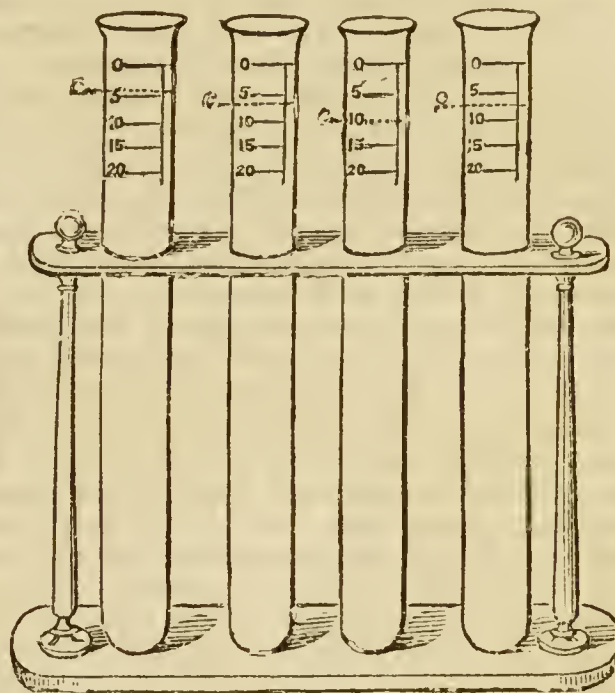
We will now proceed to show the various mechanical means by which the quality of Milk may be tested. And first, to ascertain the specific gravity, which at a temperature of 50° Fahr. is commonly set at 1.030; this must be done by means of a Hydrometer, of which a cut is here given.



Here we have an upright glass, with a stand and lip, into which the Milk to be tested is put; and a graduated glass tube, which swells out near the bottom, and terminates in a small globe loaded with quicksilver. The depth to which the tube sinks as indicated by the figures on it, shows the specific gravity of the fluid; *a* indicates the

range of pure Milk. Fat, being lighter than water, the less of the fatty constituent or Cream there is in the Milk, the greater will be its specific gravity; but this, although a commonly received test of the goodness of Milk, is by no means a sure one; for a low specific gravity does not always indicate a deficiency of Cream, nor *vice versa*.

A better test than this is found in the *Lactometer*, invented by Sir Joseph Banks. This consists of a tube usually eleven inches

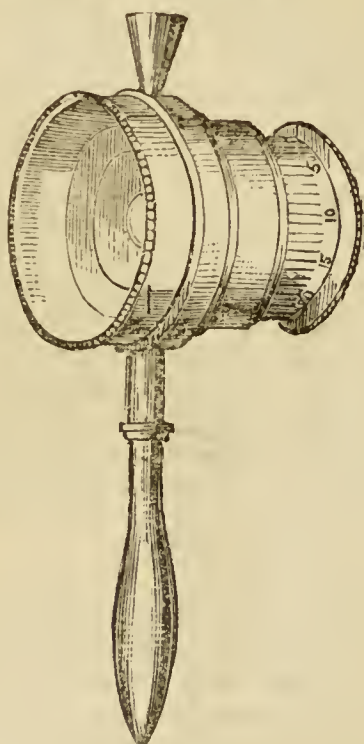


long and half an inch in diameter; ten inches of this are graduated in tenths of an inch—that is, in hundredths of the whole. The tube is to be filled with Milk, and set aside for twelve hours; the Cream ascends to the surface, and its amount is determined by the thickness of the stratum formed, and which is ascertained by noting the number of degrees or tenths through which it extends. Some lactometers resemble test tubes in shape, and, like them, are supported in racks; they are usually graduated only on the upper two inches; others are provided with feet, and are graduated throughout the whole length: as the quantity of Cream not unfrequently exceeds 20 per cent. the tubes should in all cases be graduated for nearly their whole length.

The construction of the Lactometer is shown in the accompanying woodcut, representing a rack holding four of these instruments, by which may be ascertained at the same time the comparative richness of as many different samples of Milk. The dotted lines in the cut indicate the per centage of cream, in four different samples of milk, after standing four hours. In making such comparative observations upon a number

of samples, it should be borne in mind that Cream forms more quickly in cold than in warm weather; therefore they should all be of the same temperature, and should be put into the tubes, and remain there the same time.

It is an impression with some that the addition of a little warm water to Milk increases the quantity of Cream; this is a mistake; it merely facilitates and hastens its formation and separation. It should be known that the amount of Cream yielded is no positive criterion of its quality, as some Milks are rich in cream but deficient in Caseine and Sugar, and *vice versa*; and besides this, although most of the Cream, which is identical with the fatty matter, rises to the surface, yet part remains diffused through the liquid; so that we do not by the above means ascertain the entire quantity of fatty matter present. When it is necessary to do this, drop a little Acetic Acid into a measured quantity of Milk; the acid precipitates the caseine, and this, in separating, becomes incorporated with nearly all the butter, the two together forming the curd; this is to be collected in a weighed filter, by means of blotting paper, and the fat dissolved out with ether; the ethereal solution is next to be evaporated in a weighed capsule, with a gentle heat; the weight of the residual fat being ascertained by the increased weight of the capsule. This method of determining the richness of Milk in butter is more accu-



rate than than by the lactometer. Another means of ascertaining this is by the *Lactoscope*, invented by M. Donné of Paris.

This instrument consists of a kind of eye-

glass, composed of two tubes standing one within the other, furnished with two parallel glasses, which approach each other up to contact, and separate more or less from the other at will by means of a fine screw; a little funnel, destined to receive the Milk, is placed at the upper part; on the opposite side is placed a handle, which serves to hold the instrument. The tube which screws within the other forms the part to which the eye is applied; it is marked with divisions to the number of 50, the figures which indicate the richness of the Milk, of which the sample should be taken from the mass, and not from the surface only; it is therefore best to agitate the Milk a little previous to taking it. Fill the funnel, and turn the ocular tube from right to left, until the liquid has flowed between the plates of glass and collected at the bottom; then turn the tube in a contrary direction, from left to right, and look through it until the flame of a taper or candle can be distinguished. At this point, stop, and give a slight rotary movement to the instrument, until by a little manipulation the light is just about being lost to view, without going beyond the moment when it is altogether obscured. That is the time when it is necessary to stop, and read the figure of the division to which the arrow corresponds, which we may suppose to be 25.

A great deal of nicety is required in the management of this instrument; but a little practice will enable one to use it without difficulty, and obtain the most accurate results; care must be taken to clean it perfectly after using it, and to avoid breathing on the glass of the eye-piece while doing so. The light should be placed about three feet from the observer, who may assure himself of the accuracy of the instrument by adding a very small quantity of water or even gruel to the Milk. Twenty degrees of water are sufficient to change the transparency of the liquid. The following table indicates the richness of different kinds of Milk, after the degrees which they show in the Lactoscope:—

Milk of Cows, giving 5 per cent. of Cream, shows from 40 to 35.

The same, giving from 5 to 10 per cent., shows from 35 to 30.

The same, giving from 10 to 15 per cent., shows from 30 to 25.

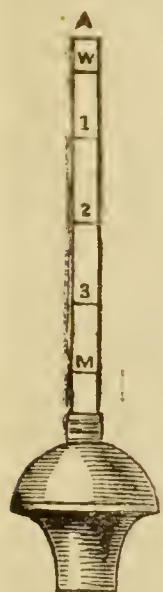
The same, giving from 15 to 20 per cent. (this is very rich), shows from 25 to 20.

Milk of the Ass, of good quality, shows from 50 to 80.

Milk of the Goat, rich, shows from 10 to 15.

Milk of Woman, rich, shows from 20 to 25; medium, 30 to 35; weak, 40 to 45.

It must be remembered that the Lactoscope has regard to only one element of Milk, and does not estimate the amount of Sugar or Cheese; as far as it goes, we believe the greatest confidence may be placed in its indications.



We have now to describe an instrument of a far more simple construction, which the general fraud of dilution with water has called forth; it is termed "the Milk-tester." It is the invention of Mr. George, and may be had at No. 2, Adelphi Arcade, London. The printed directions for use are as follows:—Place the instrument in water, and drop on the rings until it floats at the line marked W; then place it in the Milk to be tested, and its quality will be at once shown. For instance, should the instrument float at any point between the divisions, it must be allowed

for accordingly; thus if between the M and the 3, the Milk would be $3\frac{1}{2}$ to a $\frac{1}{2}$ water; between the 3 and the 2, $2\frac{1}{2}$ milk to $1\frac{1}{2}$ water, and so on.

If this instrument does not possess the recommendation of being perfectly accurate, it is yet sufficiently so for all ordinary purposes, and is cheap and easy to use. Milk being so important an article of diet, both with children and grown persons, but especially the former, we may well be excused for devoting so much space to a consideration of its nature and quality; the purity and goodness of that of the cow, especially in large towns, where so many partake of it, and where the temptations to adulterate it are greater than elsewhere, is of paramount importance in a hygienic sense. The "Lancet Sanitary Commission," which has done such good service to the public, as to merit the title of a National Institution for the General Good, has turned its attention to this among other dietary articles, and given this result of the analysis of twenty-six samples of Milk obtained from sellers in various parts of London:—1. That twelve were genuine; 2. That of these, two showed a deficiency of cream; 3. That eleven were adulterated; 4. That this adulteration consisted, in all cases, of water, the per centage of which varied from ten to fifty per cent., or one-half of the article; 5. That in no case was chalk, size, gum, sheep's brains, or any of the other substances occa-

sionally used for the adulteration of milk detected.

This result is more favourable than could have been expected from the belief generally entertained of the gross sophistication to which Milk is constantly subjected at the hands of vendors; but it does not necessarily follow that, because the Milk is not actually adulterated, it is therefore good and pure, its quality as a nutrient depends so much upon the food and state of health of the animal that yields it, that the greatest attention ought to be paid to this. By means of railways this article of general consumption is now sent into the large towns from the country, where the cows have plenty of fresh air and good pasturage. Hitherto—and it is still too much the case—they have been crowded together in close places, out of which they never stir, and which are perfect Augean stables of filth and corruption; fed upon grains and other stimulating food to increase their productive powers, and in a constant state of disease. How could, or how can, wholesome Milk be obtained from such animals? Let our readers take care that they are supplied with Milk from a country dairy, especially if they have children who require much of this nutrient.

MILK ABSCESS. A tumour in the breast occasioned by a redundancy of milk first secreted after childbirth. See *Abscess, Breast*.

MILK FEVER (in Latin *febris lactea*). An aggravated form of the excitement which takes place at the onset of lactation; its first symptoms are increased heat of the system, preceded by shivering, and sometimes accompanied with vertigo and slight delirium; these are followed by severe headache, thirst, dry tongue, quick pulse, throbbing of the temples, and intolerance of light.

The *cause* may be a cold, or over-heating the apartment, too stimulating a diet, or any obstruction to the flow of milk from the breast.

The *treatment* should be spare diet, perfect tranquility, subdued light, cooling drinks, and saline aperient medicines; the head should be kept somewhat elevated, and bathed with cold water or evaporating lotions: if the symptoms should become worse in spite of this, apply half-a-dozen or more Leeches to the head, and put the feet in a warm Mustard bath. Most lying-in women have more or less of this fever, which is no doubt an effort of nature to rouse the hitherto dormant mammary organs to secrete a proper quantity of milk; if, however, it is not checked the arterial

action runs too high, and no milk at all is secreted.

MILK TEETH. A name given to the first set, which are shed in childhood. See *Teeth*.

MILLEPEDES (Latin *mille*, a thousand, and *pes* or *pedis*, a foot). Slaters or Woodlice, called by children Pea-bugs, because they roll themselves up into a ball like a pea, when touched, were formerly used as remedial agents, being killed by the vapour of spirits of wine; they were employed in humoral asthma, and dropsy.

MILLET (in Latin *milium*). The grain of the *Panicum Miliaceum*, and other species of the natural order *Gramineæ*, has been long used as an article of diet in India and America, as well as in Italy, Germany, and several parts of Europe. The Italian and German Millet seeds are largely imported



into this country, but they are chiefly used as food for birds. One advantage possessed by the plant is, that it will grow and produce far more largely than wheat, in the poorest soil. It makes a nourishing farina, and is a good thickening for soup, but not, perhaps, so good as pearl barley or sago.

MILT. This is the flat, rounded mass, of a livid colour, situated behind the large end of the stomach; its use is not clearly understood. See *Spleen*.

MIMOSA. The name of a genus of leguminous plants remarkable for having leaves which recede from the touch, and close together, hence the name "sensitive plants," which has been applied to them.

It was formerly supposed that from one of them, the *Mimosa Nilotica*, the gum acacia was obtained, but it is now well ascertained that this gum is the produce of two or three other species. See *Acacia*.

MINDERERUS SPIRIT. A popular name for the Liquor of Acetate of Ammonia, which is very commonly given as a diaphoretic in febrile affections and colds; it operates beneficially without increasing the animal heat; diluents should be taken freely with it, to promote its operation on the skin, otherwise it will be likely to pass off by the kidneys; the surface of the body too should be kept warm while taking it; the dose is from 2 to 6 drachms, largely diluted, about every six hours; it is generally taken in Camphor Mixture, and often combined with Sweet Spirits of Nitre. It makes an excellent evaporating lotion for sprains, bruises, and inflamed surfaces; and also a good collyrium, mixed with about three parts of Rose Water. See *Ammonia*.

MINERAL WATERS, are waters impregnated with mineral substances, such as iron, salt, sulphur, &c., so strongly as sensibly to affect the taste and smell. They are usually of a higher temperature than ordinary water, and are much taken by invalids for various diseases. They are, generally, classified under the several heads of Acidulous, Carbonated, Chalybeate, Hot, Saline, and Sulphureous. The composition and special qualities of the principal Mineral Springs of this country and the Continent are spoken of under their several alphabetical heads.

MINIM (Latin *minimus*, least). The smallest liquid measure, generally regarded as about equal to one drop. The fluid drachm is divided into 60 minims. From the same root we have also *minimum*, which is opposed to *maximum*, and means the lowest degree, or least appreciable point or intensity of disease.

MINT. Peppermint, Pennyroyal, and Green, or Spearmint, are the members of the extensive tribe of plants called Mint, which are of the greatest medical utility; their particular properties and uses are described under their several heads: of the Mints generally we may observe that they owe their carminative properties to their pungent, essential oils, and that they belong to the natural order *Labiata*.

MISCARRIAGE. The expulsion of the foetus from the uterus within ten or twelve weeks after conception is, generally, so called; if this takes place after the above-named period, and within six months, it is termed *Abortion*; if during any part of the last three months, before the completion of the

natural term, it is *Premature Labour*. See *Abortion*.

MISERERE MEI (Latin for pity me). A name sometimes applied to the colic, from the pain it creates.

MISTURA (Latin *misceo*, to mix). A mixture, or extemporaneous liquid preparation. See *Mixtures*.

MITHRIDATE. An old medical composition having opium for its basis; it is now replaced by the confection of *Opium* (which see).

MITRALIS (Latin *mitra*, a mitre). A mitre-shaped valve which guards the left ventricle of the *Heart* (which see).

MIXTURE (Latin *mistura*). This is a medicinal compound in the fluid form, in which remedies are very commonly administered: it may be composed of soluble or insoluble ingredients, or a portion of both, and is distinguished from a solution, by containing that which is only mechanically combined with the liquid or vehicle, whatever it may be, and not dissolved. To make most Mixtures properly, it is necessary to rub down the ingredients together in a mortar, adding the fluid gradually, this is especially the case if it contains any light powder, such as *Magnesia* or *Rhubarb*.

When there are heavy ingredients, such as *Chalk* or *Bismuth*, a little powdered *Gum Acacia* or *Mucilage* will be required to keep them in suspension. Beside the Mixtures prescribed extemporaneously by the physician, there are many set forms in the *Pharmacopœia*, of which these are the principal:—*Acacia Mixture*, which is simply *Water* and *Gum*; *Almond Mixture*, sometimes called *Almond Emulsion*, made with *Conserve of Almonds* and *Water*; *Ammoniacum Mixture*, made by rubbing down *Gum Ammoniacum* with *Water*; *Barley Mixture*, made with *Pearl Barley*, *Figs*, *Raisins*, *Liquorice Root*, and *Water*; this is identical with the *Compound Decoction of Barley*; *Camphor Mixture*, which is *Camphor* dissolved in *Water*; the same with *Magnesia*; *Chalk Mixture*, composed of *Prepared Chalk*, *Sugar*, *Mucilage*, and *Cinnamon Water*; *Compound Gentian Mixture*, made with the *Infusion of Gentian* and *Senna*, and *Tincture of Cardamums*; *Guaiaecum Mixture*, made with *Gum Guaiaecum*, *Sugar*, *Mucilage*, and *Cinnamon Water*; *Compound Iron Mixture*, made with *Myrrh*, *Carbonate of Potash*, *Sulphate of Iron*, and *Rose Water*; *Scammony Mixture*, *Gum Scammony* rubbed down with *Milk*; *Spirit of French Wine Mixture*, *Brandy*, *Yolk of Egg*, *Sugar*, and *Cinnamon Water*, given in cases of great prostration;

for the doses and uses of these several Mixtures the reader is referred to the several heads of their chief ingredients.

MOBILITY (Latin *mobilis*, moveable). A term applied by Dr. Cullen to excessive susceptibility to impressions; one of the affections of nervous persons. It is, also, with its opposite *immobility*, used to signify the state of a joint or limb.

MODIOLUS (diminutive of the Latin *modus*, a measure). It is applied in surgery to the bony pillar in the centre of the cochlea, which is encircled by the *laminæ spiralis* (see *Ear*); and to the crown, or saw, of the *Trepan* (which see).

MOFFAT. A village about sixty miles from *Edinburgh*, which has a sulphurated spring, somewhat more saline, but less gaseous, than that of *Harrowgate*. It acts only as a diuretic, but is efficacious, although in a minor degree, in the same cases as the above-named waters.

MOLARES (Latin *mola*, a mill-stone). The double or grinding *Teeth* (which see).

MOLASSES or MELASSES (from the Latin *mel*, honey). The uncrystallizable part of the juice of the sugar cane, which is separated from the sugar during its manufacture. See *Treacle*.

MOLE (Latin *mola*, a mill-stone). This is, 1st, a brown macula or spot, generally, but not always, congenital; 2nd, a morbid product of conception, not, as is commonly supposed, consisting of a false germ, but a fleshy, or ligated substance, found in the uterus, which has seldom, if ever, any connection with an impregnated condition of the organ. This should be clearly understood, as suspicions, injurious to character, arise very frequently from the growth of this "false conception," as it has been erroneously termed.

Moles in the skin, or as they are commonly called *Mother-marks*, are beyond the reach of surgical treatment; or, if they ever can be removed, it is only at the risk of causing a greater disfigurement; therefore, they had better be left alone, the more especially as they not unfrequently answer a useful end, that of positive identification. See *Nævus*.

MOLLITES (Latin *mollis*, soft). Softness, or softening; hence, we have *Mollites cerebri*, softening of the brain, called by the French *Ramollissement du cerveau*; *Mollites ossium*, a morbid softness and flexibility of the bones, sometimes called *Fragilitas ossium*.

MOLLUSCUM (same root as above). Applied to a wen or moveable tumour, which has but little sensibility, and is often elastic

to the touch, containing atheromatose or pap-like matter. This is the third genus of the *Tubercula* of Bateman. See *Tubercles*.

MONARDA. *Horsemint*. The *Monarda Punctata*, of the natural order *Labiata*, is a plant used in American practice. Like the Mints generally it is aromatic, and yields a volatile oil, which is highly stimulant, and has a powerful odour; it is given as a car-



minitive in doses of 2 or 3 drops, on a lump of sugar; externally it acts as a rubefacient; the leaves and twigs of the plant, like those of spearmint, are made into an infusion, which is given in flatulent colic. The Horsemint has also been recommended as an emmenagogue.

MONESIA. Under this name a drug has been introduced into Europe; it is in the form of thick brown cakes, and is undoubtedly a vegetable extract, probably from a species of *Chrysophyllum*, of the natural order *Sapotaceæ*: it possesses astringent properties, and has in France been successfully employed in internal discharges, such as leucorrhœa, menorrhagia, diarrhœa, &c. It has also been given in chronic bronchitis, and applied externally in powder to atonic ulcers; the dose is from 2 to 10 grains, frequently repeated.

MONKSHOOD. A highly poisonous plant whose tall spike of purple, hood or cap-shaped blossoms, is frequently seen in gardens. See *Aconite*.

MONOMANIA (Greek *monos*, and *mania*, madness). A species of insanity in which the mind wanders upon one subject only.

The disease may be either acute or chronic, and take any form, horrible or absurd. It may lead to homicide, suicide, arson, or theft; and, induce one, in every other respect in possession of his full senses, to commit the most dreadful, or ridiculous acts. See *Insanity*, *Mania*.

MONOCULUS (Greek *monos*, single, Latin *oculus*, the eye). A bandage formerly used for lachrymal fistula, and diseases of the eye, was so called.

MONORCHID (Greek *monos*, and *orkos*, a testis). Having but a single *Testicle* (which see).

MONSTRUM. Applied to an unnatural birth or production; a monster; a *lusus nature*.

MONS VENERIS (Latin *mons*, a mountain). The eminence over the *os pubis* in women.

MORBID GROWTHS (Latin, *morbus*, death). These may consist of structures which naturally form part of the body, or, which are quite foreign to it in a healthy state; they may be owing to mal-secretion by the cells of the structure, or to a supply of unhealthy material by the blood. Their nature is commonly determined by the structures in which they are found; thus they resemble serous membrane in the pleura, cartilage in the joints, and muscle in the uterus. One of the most common of the morbid growths is fat, which is often deposited in situations where it seriously obstructs the formation and passage of the secretions, the course of the circulation, or some other organic function necessary to a healthy state of existence: hence we have atrophy, internal ulceration, softening of the bones, and other dangerous results. These, with calculi, or stones in the bladder; albumen and sugar in the urine, constituting Bright's disease; ossification of the heart, and calcareous degeneration of the muscles, are all owing to morbid growths which may be termed *natural*; those of an *unnatural* structure, generally arise from a morbid state of the blood itself, the ulceration of whose constituent elements causes the formation of cells in the parts nourished by the blood, differing from those of the natural shape and character; if the mischief is confined to the particular structure first affected, we call the morbid growth non-malignant; but if it extends to the surrounding structures, pursues the course of the absorbents, and attacks the lymphatics, then it is malignant deposit. We have an example of the former in *Tubercle* (which see); this occurs in scrofulous subjects; and of the latter in that fearful disease *Cancer* (which see).

MORBILLI (Latin *morbillus*, being the diminutive of *morbus*, a disease). This is a term borrowed from the Italian, among whom *il morbo* (the disease), signifies the plague. It is the term by which continental writers generally designate the *Measles* (which see), and *Rubeola*. From *Morbus* come, also, a great number of old, or foreign, names of particular diseases: thus we have *M. aphrodisius*, syphilis; *M. arcuatus*, or *arguatus* (from *arcus*, a bow), so called from one of the colours of the rainbow, jaundice; *M. caducus*, epilepsy or falling sickness; *M. interpellatus*, a disease attended with irregular or uncertain paroxysms; *M. ceruleus*, cyanosis, or blue disease; *M. cardiacus*, typhus fever; *M. coxarius*, disease of the hip; *M. gallicus* or *M. rabulus*, frambæsia or yaws; *M. niger*, melæna, or black disease; *M. pedicularis*, lousy disease; *M. pilaris*, hair-worm disease; *M. regius*, king's evil; *M. sitibundus*, diabetes; *M. sudatorius*, sweating sickness; *M. pathetici*, depraved appetite, &c. &c. All these will be found under their several heads.

MORBOSUM AUGMENTUM. An old name for a preternatural growth or formation of new matter, generally of an unhealthy or morbid character.

MORIA (Greek *moros*, foolish). A defect of the understanding, fatuity, or foolishness.

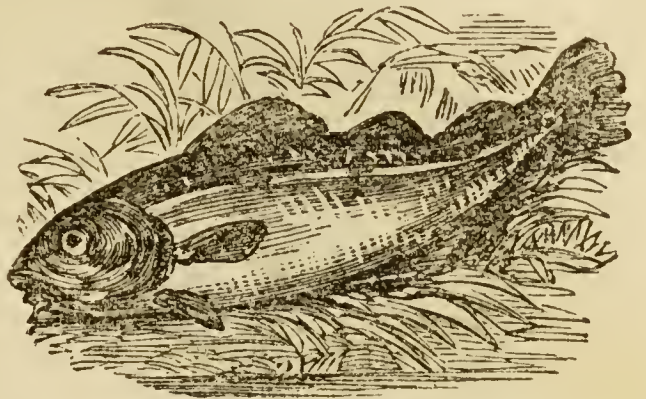
MOROXYLIC ACID (Greek *moron*, the mulberry, and *xylon*, wood). An acid produced from the bark of the mulberry tree; its salts are called *Myroxalates*. See *Mulberry*.

MORPIO. A name for the *Pediculus pubis*, or Crab Louse, which burrows in the skin, chiefly of the groins and eyelids; it is the result of contact with persons already affected, and can only be eradicated by the utmost attention to cleanliness: an unguent of the mercurial preparation called White Precipitate, rubbed into the part, will destroy the insect, as it will the common louse.

MORPHIA. An alkaloid discovered in opium in combination with a peculiar acid termed meconic. It is in Morphine that the narcotic principle of opium resides. Its medicinal salts are:—the *Acetate*, prepared by adding to four parts of Morphine, dissolved in eight parts of distilled water, acetic acid of the specific gravity of 1.075, until the mixture gives a slight tinge of red to litmus paper; the solution is then evaporated to dryness, and the salt reduced to a powder: the dose of which is from a $\frac{1}{4}$ of a grain to 2 grains in solution. The *Sulphate* is prepared by pouring dilute sulphuric acid into an alcoholic solution of Morphine, and evaporating, &c., as above. Dose, same as

the *Acetate*. The *Citrate* and *Muriate* are prepared by the direct combination of these constituents; they have not come much into use, and, therefore, need not be more fully noticed here. See *Opium*.

MORRHUÆ OLEUM. The oil derived from



the liver of the *Gadus morrhua*, or common Codfish. See *Cod Liver Oil*.

MORSULUS (Latin for a little mouthful). A name sometimes applied to a form of medicines like drops or lozenges, which have no regular shape.

MORTARS AND PESTLES. Our readers are too well aware of the nature and uses of these conveniences for the preparation and compounding of medicines to render any lengthened description of them necessary; the materials of which they are made are iron, bell-metal, or brass, marble, Wedgewood ware, or glass. For pills, which require much hard beating, a metal Mortar



is the best, but for most other purposes nothing possesses such advantages of combined strength and cleanliness as the Wedgewood; for acids and corrosive substances, glass should be used, care should be taken not to hammer or pound in such, for although tolerably strong, it is only suitable for the grinding or mixing operation. A Mortar capable of holding a pint is the most convenient size for family use; those put into medicine chests are generally too small. Our cut represents the best

form for the metal, 1; and the Wedgewood Mortar, 2.



MORT DE CHIEN (French for Dog's Death). A name of the Spasmodic Cholera, thought by some to be a corruption of the Indian or Arabic name of the disease, the former of which is *Mordezym*, and the latter *Mordekie*, both signifying "the death blow."

MORTIFICATION (*mors* or *mortis*, death, and *fiō*, to become). A generic term denoting the death of any part of the body. It may arise from a division of the nerves, a deficient supply of blood, or other causes; but, most commonly, it is the result of inflammation. When this latter is the case, we term it *Inflammatory*, *Humid*, or *Acute* Mortification; otherwise, it is *Dry*, *Chronic* and sometimes *Idiopathic* Mortification; this is most frequently found to affect aged persons, and is, therefore, called *Gangræna senilis* (See *Gangrene*) which is synonymous with Mortification, although it is sometimes spoken of as but a stage of the disease. Impeded circulation of the blood may proceed from general debility, or from local injury, or mischief of some kind affecting a part; pressure upon a large vessel, like that caused by a tumour; exhausting fatigue or sickness; intense heat or cold; or eating unwholesome grain, such as diseased rye (See *Ergotism*). All these may result in Mortification, to which some parts of the body are much more liable than others. When an inflamed part becomes unusually hot, painful, hard, and tense; when the colour of the skin becomes first dark and angry-looking, then mottled, then greenish, and raised in small blisters filled with thin fluid, there can be little doubt that gangrene has seized upon the part which exhibits these symptoms, and, unless checked in its advance, will extend to some vital part. In this case, if a medical man

has not been called in, let him be summoned immediately; in the meantime, apply warm bran poultices, or lotions of Chloride of Soda, or Lime; procure rest for the patient by means of opiates, if necessary, and support the strength with good nourishing broths and soups, &c.

If Mortification, however, has fairly set in, nothing but amputation of the limb affected will save the patient, and this should be performed quickly, or it may be too late. When there is much sloughing—which will be pretty sure to follow the blisters above mentioned, there must be warm poulticing to get away the discharge and dead matter, and, after this is removed, cold water dressing will probably suit best. Very commonly, in spite of all the efforts that can be made to support a patient under such circumstances, he will rapidly sink, especially if the disease manifests itself anywhere near to a vital part. Soon does the constitution exhibit signs of collapse; the face and hands become cold and clammy, the former has a pinched and miserable look; there is a quick, feeble pulse, a brown furred tongue, depressed or disordered mental faculties, and involuntary performance of the natural functions. But with all this there is no pain; this passes away with the inflammatory stage of the disease, and in its place a deadly torpor steals through the frame, chilling and sealing up the fountains of life.

MOTHER SPOTS (in Latin, *maculæ matronæ*). Spots and discolourations of the skin, which show themselves at, or soon after, birth. See *Moles*, *Nævus*.

MOTION. In animal physiology we distinguish three kinds of motion: 1st, the *voluntary*, which is the spontaneous act of the individual will, as dictated by the brain: 2nd, the *involuntary*, or *excited*, such as the closure of the larynx on the contact of acrid vapours; or of the pharynx on that of food; and various other muscular actions, which appear to depend on nervous susceptibility: 3rd, that of *irritability*, as the action of the heart, &c., which may be increased or diminished according to the greater or less degree of stimulus applied.

MOTOR (Latin, *moveo* to move). A mover, hence the terms *motores oculorum*, the movers of the eyes, the name of the third pair of nerves. The metals were denominated by Volta *motors* of electricity, from their property of transferring the electrical fluid to each other by simple contact, and the process which thus takes place was called by Sir H. Davy *electro-motion*.

By the term *motor-change*, we understand the metamorphosis of some of the elemen-

tary constituents of the muscular fibres, chiefly by combination with the arterial blood, which is constantly going on, and is a consequence of the movement of the muscles, whether voluntary or involuntary, giving rise to expenditure of the substance of the fibres.

MOULD OR MOULDINESS. A peculiar plant propagated by seeds infinitely small; from the circumstance that mould has been found in the interior of an addled egg, Reaumur has inferred that these seeds can make their way through the pores of the shell. This vegetable mould, sometimes called *humus*, and which Braconnêt had stated to resemble *Ulmin*, has been called by Berzelius *Geine* or *Geic Acid*, from the Greek *geinos*, earthy.

MOUTH (in Latin, *os*, *oris*). The cavity in which the tongue and teeth are contained, which serves as a receptacle for the food which is to be conveyed to the stomach, and by means of which articulate sounds are rendered possible. The parts which are immediately connected with it are the lips, the upper and lower jaws, the palate and tonsils, and the fauces generally; it is lined by the mucous membrane, which stretches from the tongue to the lower jaw; and is surrounded by the salivary glands, which open into ducts in various parts of the cavity, and supply it with moisture. The diseases to which this part of the human frame is liable, are spoken of under their several heads.

MOXA. This is a remedy of Chinese origin, being a mode of applying cauterization to any part, by igniting a piece of German tinder, or inflammable fungus, and fixing it to the diseased spot until it burns away the cuticle. It is employed as a counter-irritant in gout, rheumatism, and some other disorders. The true Chinese Moxa is made with the leaves of the *Artemisia Latifolia*, and other plants. In Europe, the stalk of the great sunflower is sometimes used for this purpose.

MUCILAGE (from the Greek *muka*, mucus). An aqueous solution of gum, frequently used for keeping heavy bodies suspended in liquid, or oily ones intimately blended, and as a demulcent in diseased and irritated states of the chest and bronchial passages; in the Pharmacopœia we find the Mucilages of *Acacia*, *Barley*, *Starch*, and *Tragacanth*, all useful forms of preparation, to which allusion is elsewhere made. *Mucic Acid* is an acid first obtained from the sugar of milk, and hence called *saccolactic*; but since it was ascertained that all gums yielded it, in greater or less degrees, it has been termed as above.

MUCUS. Greek for the thick glairy secretion which forms on the surface of the mucous membranes. When examined under the microscope, it is found to consist of minute granular particles, like those which compose pus or matter; if the result of inflammation, it is thin and acrid, as we find it in the discharge from the nose in cold or influenza. It is a combination of albumen and alkali, and is not naturally viscid, this property being a sign of irritation of the membrane from which it exudes; it is therefore, when in this state, symptomatic of disease, which we may understand is going on in the intestines, when we observe thick slimy mucus in the evacuations.

MUCOUS MEMBRANE. Is that which lines certain internal portions of the body, such as the mouth, nose, eyes, throat, air passages, and bronchi; the gullet, stomach, and bowels, to the anus, or vent; also, the kidneys, bladder, &c. This membrane is covered on the surface with what is termed the epithelium, a series of flattened cells, in which the mucus is secreted. See *Membrane*.

MUDAR. The name of a shrub much used in India on account of its alterative, diaphoretic, diuretic, and purgative properties; it is the *Asclepias*, or *Calatropa Gigantieca*, of botanists, and belongs to the natural order *Asclepiaceæ*; its milky juice



has been used as a substitute for gutta percha. *Mudarine* is the active principle of the Mudar root, remarkable from the circumstance that its solubility in water decreases with the increase of temperature.

MULBERRY. This tree belongs to the natural order *Urticaceæ*; it is the *Morus Nigra* of botanists, and a native of Persia, although extensively cultivated in most

parts of Europe and America; its leaves are chiefly used as food for the silkworm, they are also eaten by cattle; its fibre is converted into cordage, paper, and textile fabrics; its wood is used for cabinet work,



and it yields a pleasant acidulous fruit, which is eaten fresh, made into a preserve, and wine, and also by fermentation into vinegar, and by distillation into alcohol. Of the Mulberry there are several species; but the above is with us the most common; the fruit is very wholesome, if eaten fresh, but it very quickly suffers decomposition, and changes its character; it should always be taken within twenty-four hours of being gathered. The juice is sometimes used as a refrigerent in fevers, and as an expectorant in coughs; it is slightly laxative, and keeps best as a syrup.

MULBERRY CALCULUS. A kind of urinary calculus, consisting of oxalate of lime, and so named from its rough and tuberculated surface. See *Calculus*.

MULBERRY EYELID. An old name for prurient ophthalmia, so called from the discoloration of the lid which it causes.

MULSUM. A kind of wine sweetened with honey, or hydromel. See *Mead*.

MULTI-CUSPIDATI (Latin, *multis* many, and *cuspis* a spear). The name of the three last molars, so called from their having several tubercles. See *Teeth*.

MULTIFIDUS SPINÆ (Latin, *multus*, and *findo*, to cleave). The name of a mass of muscles, which are placed obliquely from the transverse to the spinous processes. They have been described as three sets of muscles, by the names, *Transverso-spinalis colli*, *T.—s. dorsi*, and *T.—s. lumborum*.

MULTUM. The technical name of a com-

pound of Quassia and Liquorice, employed by brewers for economising malt and hops. The *Hard Multum*, or *Black Extract*, with which they impart an intoxicating quality to the beverage, is prepared from *Cocculus Indicus* (which see).

MUM. A kind of malt liquor made with the malt of wheat.

MUMPS. The popular name in this country for *Cynanche parotidæ*, or *Parotitis*. In Scotland, it is called *Branks*. This disease, which is a contagious epidemic, consists of inflammation of the salivary or parotid glands, which are situated on each side of the lower jaw. It commences with slight febrile symptoms of a general character; very soon there is redness and swelling at the angle of the jaw, which gradually extends to the face and neck near to the glands, these sometimes become so large as to hang down a considerable distance, like two bags. But little medical treatment is required for this disease when at its height; the patient, from sheer inability to move the jaw, must live chiefly on slops; and it is well for him to be kept low, unless very delicate, in which case, a little good broth or beef tea, should be given. If there is much pain, the throat should have hot fomentations applied, and perhaps two or three leeches. Mumps is not a dangerous disorder, unless the inflammation should be turned inwards, in which case, it will probably affect the brain or testicles.

MUNGO. The native name for the root of *Ophiorrhiza Mungos*, which is supposed to be a specific for the bite of the most



deadly serpents. In India and Ceylon it is employed as an antidote to that of a mad dog. It is very questionable, however, whether the plant, of which we give a cut, possesses the virtues attributed to it.

MUNJEET. A species of *Rubia Tinctora*, or Madder, produced in Nepaul, and other districts of India. That which comes to England, is chiefly from Calcutta.

MURIATE (Latin *urias*, signifying brine). A salt formed by the union of muriatic acid with an alkaline, earthy, or metallic base; we now term it a hydrochlorate. Metallic Muricates contain either an access or deficiency of acid, in the former case they are termed *Oxy-muricates*, in the latter, *Sub-muricates*; when in a state of dryness, they are called *Chlorides*, consisting of Chlorine and the metal. The Muricates chiefly employed for medicinal purposes are those of Ammonia, Iron, Lime, Mercury, Potash, and Soda, the properties and uses of which are described under their heads. *Muriatic* or *Hydrochloric Acid*, commonly called Spirits of Salts, is procured abundantly from sea water in combination with soda and magnesia; it is a compound of chlorine and hydrogen gas, and possesses strong bleaching and antiseptic properties. It enters into the composition of the Muricated Tincture of Iron, commonly known as Steel Drops, (see *Iron*), and is administered beneficially in typhus, scarlatina, and other malignant fevers; it is given, too, as a tonic, combined with vegetable bitters; is used in the form of gargles in putrid sore throat, and injections in gonorrhœa when *ardor urinæ* becomes troublesome; 2 or 3 drops to an ounce of water is sufficiently strong for the purpose. Given after copious evacuations it prevents the generation of intestinal worms, for this purpose it should be taken in Infusion of Quassia. The common dose of this acid is from 15 to 20 drops; it should never be taken in a leaden or pewter spoon. See *Acids*.

MURIDE (Latin *muria*, brine). The name first given to bromine.

MUSCÆ VOLANTES, or *Visus muscarum*. An appearance of motes, or small bodies, floating before the eyes, indicating a diseased or excited state of the optic nerves; it is the common precursor of *Amaurosis* (which see), also *Eye*.

MUSCLES. Properly so called, these are the fleshy portions of the animal frame; it is by means of the museular fibres that its various motions are effected; all flesh being, in fact, Muscle devoted to this purpose. These Muscles are bundles of fibres of a tubular structure, bound together by what

is called areolar tissue; they are endowed with the property of contractibility, which operates under the influence of certain stimuli; but they contract after different manners, some doing so simultaneously, some alternately, and others successively. Some act in accordance with, and some altogether independent of, the will, and their strength and endurance depends chiefly upon the amount of nervous energy brought to bear upon them. A Muscle never gets tired, however violently or continuously it may be exercised; the exhaustion is in the brain, not in the mechanism which it sets to work. The action of the heart and lungs is unceasing, and this is produced by museular contraction and expansion, and this is independent of the will; therefore it causes no sense of weariness. When we desire to walk or run, or take any kind of exercise, it is the brain that, through the nerves, stimulates certain Muscles into action and keeps them so, until the desire for such action ceases; in this case we have fatigue and a sense of exhaustion supervening, sooner or later, according to the violence of the exercise, or the amount of nervous energy which the person possesses, and this is his physical strength. A bird will continue to beat the air with its wings for an immense time without the necessity for rest; here we have partly an exercise of the will, and partly an involuntary motion, hence fatigue does not come so soon as if the act of flying depended wholly on the former. We can measure the strength of a Muscle by the weight which it will bear without breaking, but neither this, nor its size and firmness, will give us any idea of its working power in the animal economy; this must depend entirely upon whether its movements are voluntary or involuntary.

The Muscles, then, are as Wilson describes them, "the moving organs of the animal frame:" they constitute, by their size and number, the great bulk of the body, upon which they bestow form and symmetry. In the limbs, they are situated around the bone, which they invest and defend, while they form to some of the joints a principal protection. In the trunk, they are spread out to enclose cavities and constitute a defensive wall, capable of yielding to internal pressures and again returning to its original position.

Their colour presents the deep red which is characteristic of flesh, and their form is variously modified to execute the varied range of movements which they are required to effect.

Muscle is composed of a number of parallel fibres placed side by side and supported and held together by a delicate web of areolar tissue ; so that, if it were possible to remove the muscular substance, we should have remaining a beautiful reticular framework, possessing the exact form and size of the Muscle, without its colour and solidity. Towards the extremity of the organ the muscular fibre ceases, and the fibrous structure becomes aggregated and modified, so as to constitute those glistening fibres and cords by which the Muscle is tied to the surface of bone, and which are called *tendons*. Almost every Muscle of the body is connected with bone, either by tendinous fibres, or by an aggregation of these fibres constituting a tendon ; and the union is so firm, that, under extreme violence, the bone itself breaks rather than permit the separation of the tendon from its attachment. In the broad Muscles the tendon is spread out so as to form an expansion called *aponeurosis*, from the Greek *apo*, long, and *neuron*, a nerve, meaning a nerve widely spread out.

Muscles present various modifications in the arrangement of their fibres, in relation to their tendinous structure ; sometimes they are longitudinal and terminate at each extremity in tendon, the entire Muscle being *fusiform*, or spindle-shaped ; in other situations they are disposed like the rays of a fan, converging to a tendinous point, and constituting a *radiate* Muscle. Again they are *penniform*, converging like the barbs of a feather to one side of a tendon, which runs the whole length of the Muscle, or *bi-penniform*, converging to both sides of the tendon. In other Muscles the fibres pass obliquely from the surface of a tendinous expansion spread out on one side to that of another spread out on the opposite side. When composed of penniform or bi-penniform fasciculi they are termed *compound* Muscles.

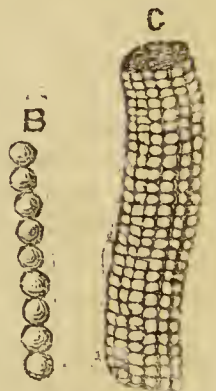
Besides the above names given to Muscles, on account of their peculiarities of form, there are others which have reference to their situations, as the *tibialis*, &c. ; others, to their uses, as *abductors*, &c. ; others, to their directions, as *obliquans*, &c. ; others, to their properties, as *contractibility*, &c. ; others, to their source of action, as *voluntary* ; others, expressive of their attachment, and others, again, of their divisions, as *biceps*, *triceps*, &c.

In describing a Muscle, a surgeon speaks of its attachment to the bone as its *origin* or *insertion* ; the first term being generally applied to the more fixed or central attachment, that is the point towards which the motion is directed, while the latter is as-

signed to the more moveable point, or that which is most distant from the centre ; these terms are, however, somewhat arbitrary, and not always applicable, as there are many muscles which pull equally towards both extremities.

It may be interesting, as well as useful, to enter a little more fully into the structure of Muscle, which, as before stated, is composed of bundles of fibres enclosed in an investment or sheath of areolar membrane which is continuous with the framework of the muscular fibres, each bundle of which, termed a *fasciculus*, is composed of a number of smaller bundles, and these of single fibres, which from their minute size, and independent appearance have been called ultimate fibres ; although microscopic examination informs us, that each one of these is itself a fasciculus made up of ultimate *fibrils* enclosed in an extremely delicate sheath called the *myolemma* or *sarcolemma* ; the appearance of one of these bundles of fibrils, as magnified, is shown in the accompanying cut.

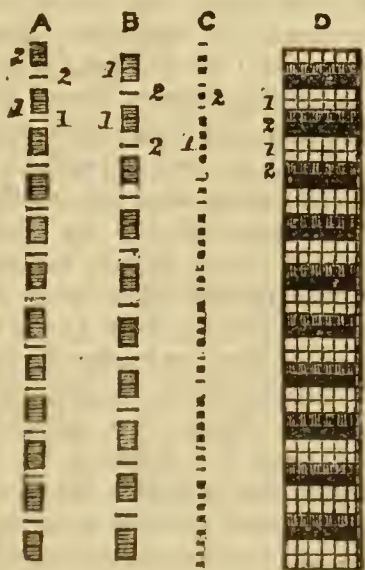
Of the ultimate muscular fibre there are two sorts in the animal economy, viz., that of voluntary or animal life, called striated Muscle, and that of involuntary or organic life, termed smooth Muscle : the former is known by its size, its uniformity of calibre, and especially by its transverse markings, which occur at minute and regular distances ; it also presents markings or striæ in a longitudinal direction, which indicate the existence of fibrillæ within the sheath, or myolemma, which is thin, transparent, and elastic. Those who have examined minutely into the subject state, that the ultimate fibres, or fasciculi, are polyhedral, or many sided, in shape, this form being due to mutual pressure ; and that the sizes differ in different classes, genera, and even sexes of animals. The ultimate fibrils of animal life, we are further informed by these close examiners, are beaded filaments, presenting a regular succession of segments and constrictions, the latter being narrower than the former, and the component substance probably less dense ; the arrangement of a bundle of these fibrils in an ultimate fibre, is such that all the segments and constrictions correspond, and in this manner give rise to the alternate light and dark lines of the transverse striæ. The



beautiful regularity of this arrangement may be seen by the diagram on page 142, in which B represents the ultimate *fibril* of animal life, and C the union of such in an ultimate *fibre*.

It has been observed, that besides the more usual separation of the latter into fibrils, it breaks, when stretched, into transverse segments, corresponding with the dark lines of the striæ, and consequently with the constrictions of the fibrils; when this division occurs with the greatest facility the longitudinal lines are indistinct, or scarcely perceptible. It has also been observed, that in the substance of the ultimate fibre, there exist minute oval or circular disks, frequently concave on one or both surfaces, and containing somewhere near the centre, one, two, or three minute dots, or granules. These corpuscles are the nuclei of the cells out of which the muscular fibre was originally developed; these corpuscles are brought into view only when the muscular fibre is acted on by a solution of one of the milder acids, as the Citric.

We have mentioned that the ultimate fibril of animal life, although cylindrical, becomes polyhedral from pressure, when forming part of an ultimate fibre or fasciculus. It measures in diameter 1-2000th of an inch, and is composed of a succession of cells connected by thin flat surfaces; these cells are filled with a transparent substance, which has been called *myoline*; it differs in density in different cells, and this circumstance imparts a peculiarity of character to certain of them, and causes the structures which they form to assume, under the microscope, a very beautiful and remarkable appearance, such as is here represented.



Let us explain a little more clearly how this is caused. When a fibril in its passive state is examined, there will be seen a series

of dark oblong bodies, separated by light spaces of equal length; now the dark bodies are each composed of a pair of cells, containing the densest form of myoline, and are hence highly refractive, while the transparent spaces are constituted by a pair of cells, containing a more fluid myoline. When the fibrils are collected together so as to form an ultimate fibre, the appearance of the cell is altered; those which look dark in the single fibril, that is, the most refractive, being ranged side by side, constitute the bright band, while the transparent cells of the single fibril are the shaded striæ of fibre. When the ultimate fibril is very much stretched, the two highly refractive cells appear each to be double, while the transparent space is evidently composed of four cells. This explanation may enable us to understand the foregoing diagram, to which we will now direct our attention: A is the ultimate muscular fibril, in a state of partial contraction; B the same, in a state of ordinary relaxation, in which we will suppose it to measure 1-2000th of an inch in diameter; C is the same fibril, stretched to the 1-5000th of an inch round; D represents the ultimate fibres, and shows the manner in which the transverse striæ are produced by the collocation of the fibrils. In 1, 1, we have a pair of the highly refractive cells, which form the dark parts of the single fibril A; but the bright parts of the fibre D; in the stretched fibril C each cell appears to be double. 2, 2, is the pair of less refractive cells, light in the single fibril, but dark in fibre; the transverse septum between these cells is very conspicuous; and in C two other septa are seen to exist, making the number of transparent cells four.

Very different from all this in its form, and arrangement, is the ultimate fibre of organic life, which Wilson, to whom we are indebted for the above diagrams, and the substance of our remarks thereon, describes as "a simple homogeneous filament, much smaller than the fibre of animal life; flat, smooth, and without transverse markings. It is of a fusiform shape, and various length, and consists of a thin external membrane, blended with a soft, homogeneous, or finely granular contained substance." This cut represents muscular



fibres of organic life, D from the urinary bladder, and E from the stomach, both magnified 600 times, linear measure; the diameter of these two fibres midway between the thick parts or nuclei, being 1-4750th of an inch.

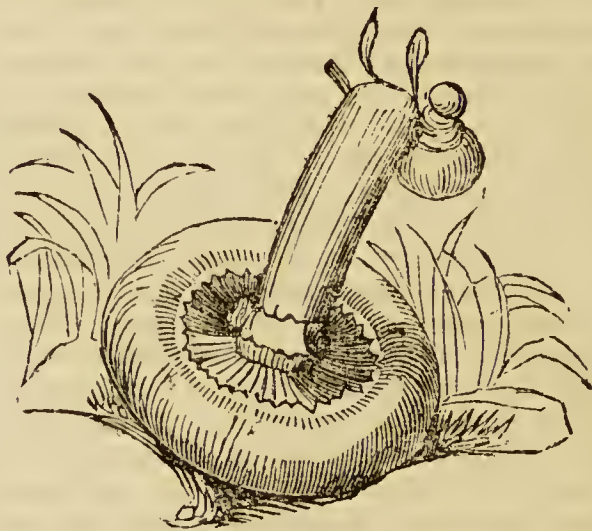
This kind of Muscle is distributed very abundantly in the animal frame, and is met with in all situations, where a distinct contractile power, independent of mere elasticity, is required.

Many examples will occur to the readers of this work, of the peculiar action of certain Muscles; for instance, in the descriptions given of the *Eye*, the *Hand*, the *Leg*, and other parts, whose movements they effect in a very distinct and remarkable manner. The chief peculiar property of these organs is their contractibility, by virtue of which they are enabled to exert so great an influence in the mechanical structure of the animal frame; every variety of form and arrangement which they present is found to correspond exactly with the especial purpose which each has to fulfil; and generally, as well as individually, they afford striking indications of the wisdom and skill of their divine contriver and maker. The absolute power exerted by a Muscle in contracting, is commonly much less than its efficient power, a great part of its force being lost by its being inserted obliquely on the lever which it has to move; or on the distance of the Muscle from the centre of motion; or on the resistance which other Muscles and the adjacent tissues present, &c. But it is constantly found, that where power is lost, there is a corresponding gain of velocity, extent of motion, compactness of force, or convenience and readiness of action, to compensate for this loss.

The injuries to which the Muscles are subject, are chiefly of a mechanical nature, such as *Cuts*, *Ruptures*, *Sprains*, or *Strains*, (all of which see); they are sure to be followed by a greater or less degree of inflammation, and especially are they liable to this in a gouty or rheumatic person, or one whose habits are such as to necessitate a vitiated state of the circulation; if a severed Muscle be excluded from the air, but little inflammatory action will probably ensue, and lymph is merely poured out for the purpose of cementing together the ends by what is termed "union by the first intention." If, however, the air have access to the torn or cut surface of fibrous or muscular tissue, there will, most probably, even in healthy persons, be high inflammation, which going beyond the point necessary for union, ends in granulation and the ordinary discharge of matter; (see *Wounds*).

Rheumatic inflammation of the fibrous tissues often affects both old and young, but chiefly persons under thirty years of age, (see *Rheumatism*), which is very often confined to certain Muscles, producing the affections known as *Lumbago*, *Wry-neck*, &c. (which see), also *Cramp*, *Colic*, *Hiccup*, and that contraction of the circular fibres of the gullet, which produces a sense of choking when food is presented, and sometimes an inability to swallow anything but the smallest morsels; this is common in hysterical women.

MUSHROOMS. The edible members of the Fungus tribe are so called; they are largely eaten with us, and still more so in some other countries: we generally esteem them wholesome, and, to some extent, nourishing; the large, flat Mushroom which grows in moist meadows, and which botanists term *Agaricus Campestris* is the best; it is dis-



tinguished from the poisonous kinds by having a smooth upper surface, whose outer skin readily peels off, exposing the fibrous structure beneath; in the young plant this outer skin is white, but it turns brown as the plant advances in age; the laminae, as the under radiating parts are called, are first pink, then light brown, and gradually darken into a colour approaching to black; the footstalk is short and thick, being seldom more than two inches high, even when, as is sometimes the case, the table which it supports is eight or nine inches in diameter. The young Mushrooms, which are called "buttons," are best for pickling, the middle-sized ones for stewing or broiling, and the larger for making ketchup. The Champignon (*Agaricus Pratensis*), is another wholesome kind; although of smaller size, it is similar to the common sort in every other respect, except in the colour of the laminae, which are of a delicate cream tint

at that early period of growth when the others are pinkish white; they grow on dry upland pastures and parks, and are very liable to be mistaken for *Toad-stools* (which see).

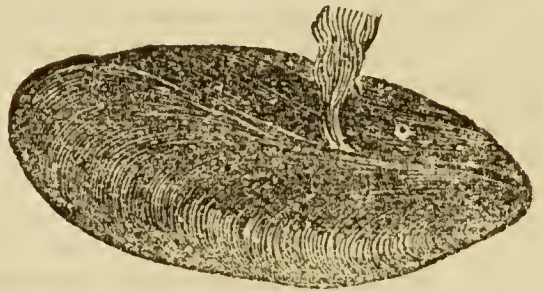
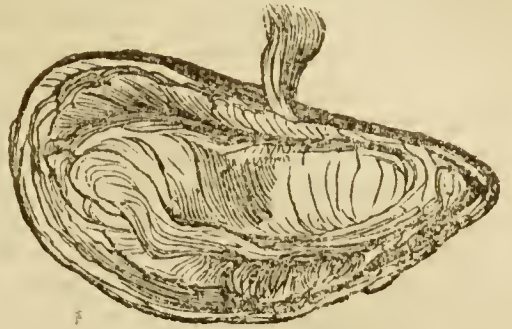


MUSK (in Latin *moschus*). An odoriferous secretion found in the peculiar bags or follicles of the male of the Musk Ox, called by naturalists *Moschus Moschiferus*: the best comes from China. It is chiefly valued as a perfume, but it possesses stimulant and antispasmodic properties which render it very useful to the medical practitioner, to whom, however, its high price denies a very extensive use. In low cases of typhoid and other fevers, it has been employed with great advantage, rousing the pulse and exciting the nervous system without heating. In chronic spasmodic diseases, such as epilepsy and hysteria, also, it may be recommended; the dose in substance is from 5 to 20 grains every three or four hours. It is sometimes combined with Ammonia, the Carbonate, or Aromatic Spirit; sometimes with Ether and Camphor.

ARTIFICIAL MUSK (*Moschus factitius*), is prepared thus:—to 1 ounce of Foetid Animal Oil, prepared by distillation, add $\frac{1}{2}$ an ounce of Nitric Acid, digest for 10 days, then add 1 pint of Rectified Spirit and digest for a month; it has much of the peculiar odour of the real secretion, but none of its medicinal properties.

MUSSEL. The *Mytilus edulis*, a kind of shell fish, which is much eaten by the poorer classes, although it sometimes acts as a poison upon the system. It has been thought that the Mussels disagreed with those who ate them, because they feed upon beds impregnated with copper, but the more probable reason is that, as they are extremely liable to become soon decomposed, they are often eaten in this state; or it may be that being very rich and fat they cause an excess of bile. Whatever

the cause may be, the best remedy is an emetic administered as rapidly as possible,



to be followed by a brisk purgative. See *Poisons*.

MUST. The expressed juice of the grape; it contains water, sugar, a peculiar matter which changes into gluten by contact with the air, mucilage, super-tartrate and sulphate of potash, tartrate of lime, and muriate of soda. The expressed juice of apples and pears is also called Must.

MUSTARD (in Latin *sinapis*). The seeds of the Black and White Mustard (*Sinapis*



Nigra, and *S. Alba*, of the natural order *Cruciferae*), contain an acrid principle: and a fixed oil, which give to them a pungen-

smell and taste, and stimulant and carminative properties. In weak and torpid conditions of the system, they are sometimes given to excite the stomach, and stimulate the nervous energy; given whole, they have this effect, and act as a laxative; in powder they act as a speedy and powerful emetic, and are, therefore, generally given in cases of poisoning. Mustard, however, is chiefly used externally; it is an excellent stimulant and rubefacient, and has generally a good effect when applied over the seat of internal inflammation, especially when the seat of such is the chest, belly, or throat. The best way to make a Mustard poultice or sinapism, is to mix together equal parts of the best flour of Mustard, and of Wheat, add sufficient boiling water to make up a very stiff paste, which spread thickly on a piece of linen rag of the required size; put a piece of thin muslin over it, and then apply it to the part affected, allow it to remain on about twenty minutes, or half-an-hour, if it can be borne, so that it reddens the skin without producing a blister, then take it off, and sprinkle the part, should it heat and burn much, with flour. Mustard lotions and ointments are sometimes used for local friction in paralysis, and as applications for chilblains and other indolent swellings. In cases of paralysis, poisoning, or torpor, from any cause, a Mustard footbath to rouse the system may be beneficially employed. The dose of the flour of Mustard, as a stimulant, is from 1 scruple to 2 drachms; as an emetic, about $\frac{1}{2}$ an ounce or more; of the Seeds, about a drachm may be given.

Vinegar is sometimes added to a sinapism, but if the Mustard is good, this is not required.

MUTITUS (Latin, *mutus*, dumb). An inability to articulate; *Dumbness* (which see).

MYDRIASIS (Greek *mydros*, moist). A preternatural dilation of the pupil, generally accompanied by moisture. See *Eye*.

MYELITIS (Greek *myelos*, marrow). Inflammation of the substance of the brain or spinal marrow, as distinguished from *meningitis*, specifically, or *encephalitis* generally. See *Brain*.

MYLABRIS. A genus of insects, two species of which, *M. variabilis*, and *M. chiconii*, are said to have been used as blistering applications in the same way as the cantharides.

MYLO (Greek *myle*, a millstone). Names compounded of this word are applied to various muscles whose attachments are near the grinder teeth; thus we have *M. hyoideus*, a triangular muscle arising from the

inside of the lower jaw, between the molar teeth and the chin, and inserted into the *os-hyoïdes*, which it raises, and so depresses the jaw.

MYOCEPHALON (Greek, *myia*, a fly, and *kephale*, the head). A small prolapsus of the iris, forming a brownish tumour as large as a fly's head. See *Eye*.

MYODESOPSIA (Greek, *myia*; *eidos*, likeness, and *ophis* sight). The imaginary appearance of floating bodies in the air, a common symptom of *Amaurosis* (which see). The technical name for these objects is, *muscæ volitantes*, *mouches volantes*: they are commonly called *motes*.

MYOIDES (Greek *myos* a muscle, and *eidos*, likeness). A muscular expansion of the neck, sometimes called *Platysma myoides*.

MYOLOGY (Greek *myos*, and *logos* a description). A description of the *Muscles* (which see). From the same root comes *Myotomy*. Dissection of the muscles.

MYOPIA (*myo*, to close, and *ops*, the eye). Short or near sight, which occasions one to contract the eyelids on looking at any object. It is also called *Myopiasis*, or mouse sight; and *Paropsis propinqua*. *Myosis* signifies an unnatural contraction of the pupil. See *Mydriasis*.

MYRICIN. The ingredient of wax which remains after digesting in alcohol; the name is derived from that of the plant called *Myrica Cerifera*, which yields much wax from its berries.

MYRISTICA. A genus of plants, of which the typical family is the *Myristicæ*, or Nutmeg tribe. The bark abounds in an acrid juice, which imparts a red stain, and the rind of the fruit has a caustic property. See *Nutmeg* and *Mace*.

MYROBALANUS (Greek, *myron* ointment, and *balanos*, an acorn). Dried fruits of the plum kind, the produce of several kinds of *Terminalia*. Four kinds are spoken of in some old medicinal works, viz.: 1st, the *Belleric*, the fruit of the *T. Bellerica*, whose bitter kernels are considered to be intoxicating; they yield an oil which encourages the growth of hair; the bark abounds in a gum like that of the acacia: 2nd, *Chebulic*, fruit of the *T. Chebula*, which grows in the Indian forests; it is very astringent, and may be given like catechu, in diarrhoea, and aphthous ulcerations: 3rd, *Citrine*, obtained from the *T. Citrina*, acts as a gentle purgative: 4th, *Indicum*, which is merely the unripe fruit of the last species. All these fruits were held in high reputation by the ancients, but they are discarded from modern practice.

MYROXYLON (Greek *myron*, a liquid perfume, and *xylon*, wood). The name of a genus of resinous plants, belonging to the order *Leguminosæ*, in which we find the *M. Peruiferum*, or Peruvian Balsam tree, which the natives of South America call *Quinquino*: the juice, which is procured by incisions in the tree, is called White Liquid Balsam. That which is sold in the shops is of a dark colour, and is obtained by boiling the twigs. See *Balsam*.

MYRRH (Greek *myron*, an ointment). The gum resin produced by the *Balsamodendron Myrrha*, a small tree belonging to the natural order *Terebinthaceæ*; possesses tonic



and antispasmodic properties, and acts upon mucous membrane as a balsamic, checking the secretions when excessive. It is given in atonic dyspepsia, in chlorosis, in amenorrhœa, and in chronic bronchitis, often in conjunction with Aloes, and Chalybeates. The Tincture is used in gargles, and the powdered Gum in dentifrices; the latter is also sometimes applied to foul ulcers; the dose of the Powder is from 10 to 30 grains: the best form of exhibition is the pill form, in combination with Aloes, Rhubarb, Galbanum, Assafœtida, and Sulphate of Iron; its officinal preparations are the Tincture of Myrrh, Compound Iron Mixture, and Pill of Aloes with Myrrh; the latter of which is a good laxative for dyspeptic patients.

MYRTIFORM. The name of the *carunculae*, which remain after the laceration of the hymen, so called from their supposed resemblance to the myrtle.

MYRTUS PIMENTA. The scientific name of the Allspice tree, a native of South America, where it is called *Pumake*, and also

of the West India Islands; hence the name Jamaica Pepper, sometimes applied to it. See *Allspice*.

N. This letter in prescriptions denotes *numero*, in number.

NÆVUS. Latin for a natural mark, spot, or blemish on an infant; generally attributed to the influence of the imagination of the mother, and therefore called *Nævus maternus*, mother's mark; sometimes *Macula maternæ*, mother-spots. These discolorations of the skin have been made by Bateman the second genus of his order *Maculae*; the following varieties are distinguished: *N. araneus*, the spider-like stain; *N. foliaceus*, the leaf-like; *N. cerasus*, the cherry stain; *N. fragarius*, the strawberry; *N. morus*, the mulberry; *N. ribes*, the currant; *N. rubus*, the blackberry stain. To these may be added the Claret or Port-wine stains, represented by the flat and purple nævus, which Plenck calls *Nævus flammeus*; and also those which resemble a slice of bacon or other flesh. See *Spilus*.

Then we have what are called the *Vascular Nævi*, consisting of 1, the *arterial*, which are enlarged cutaneous arteries; 2, the *Capillary Nævi*, which are dilated capillary vessels; 3, the *Sub-cutaneous Nævi*, probably identical with the preceding, but situated more deeply, and unattended with discoloration; this becomes the *Complicated Nævi*, when it attains a large size, and involves the subjacent texture or organs; 4, the *Venous*, or *Varicose Nævi*, which may also be sub-cutaneous, consisting of a few minute veins crowding there towards a centre, which may probably include enlarged capillaries; or it may be the larger veins, full and turgid, standing out from the skin, and resembling varicocele; 5, the *Increscens* or increasing Nævus, which is distinguished from the stationary kinds by the manifest advancement in size.

NAILS. Like the hair, the Nails may be regarded as a prolongation of the epidermis or outer skin; they consist of flattened cells filled with horny matter, which is supplied by a number of papillæ, or vascular points situated in a fold or matrix of the true skin, which is about two lines in depth; the fresh matter which is continually developed, pushes forward the old, and that causes the growth of the Nail, which if not frequently cut would grow to a very inconvenient length. At its first formation the Nail is extremely thin, but as it advances, it gradually acquires thickness by the addition of fresh layers of cells to its under surface, which cells are formed by papillæ which also serve to retain the

Nail in its place. Much of the beauty of the hand depends on the state in which the Nails are kept. Durlacher says, that, "according to European fashion, they should be of an oval figure, transparent, without specks or ridges of any kind; the semilunar fold or white half-circle should be fully developed, and the pellicle or cuticle which forms the configuration around the root of the Nails, thin and well-defined, and, when properly arranged, should represent as nearly as possible the shape of a half-filbert. The proper arrangement of the Nails is to cut them of an oval shape corresponding with the form of the finger; they should not be allowed to grow too long, as it is difficult to keep them clean; nor too short, as it allows the ends of the fingers to become flattened and enlarged by being pressed upwards against the Nails; and gives them a clumsy appearance. The epidermis which forms the simicircle around, and adheres to the Nail, requires particular attention, as it is frequently dragged in with the growth, drawing the skin below the Nail so tense as to cause it to crack and separate into what are called agnails, or, more popularly, hag, or hang-nails. This is easily remedied by carefully separating the skin from the Nail by a blunt, half-round instrument. Many persons are in the habit of continually cutting the pellicle, in consequence of which it becomes exceedingly irregular, and often injurious to the growth of the Nail. They also frequently pick under the Nails with a pin, penknife, or the point of sharp scissors, with the intention of keeping them clean, by doing which they often loosen them, and occasion considerable injury. The Nails should be cleaned with a brush, not too hard, and the semicircular skin should not be cut away, but only loosened without touching the quick, the fingers being always dipped in tepid water, and the skin pushed back with a towel. This method, which should be practised daily, will keep the Nails of a proper shape, prevent agnails, and the pellicles from thickening or becoming ragged. When the Nails are naturally ragged, or ill-formed, the longitudinal ridges or fibres should be scraped and rubbed with lemon, afterwards rinsed in water, and well dried with a towel; but if the Nails are very thin, no benefit will be derived from scraping; on the contrary, it might cause them to split. If the Nails grow more to one side than the other, they should be cut in such a manner as to make the point come as near as possible to the centre of the end of the finger."

The latter rule, however, will not apply to toe Nails; they should be cut nearly straight across, leaving the corners, which in consequence of the pressure of the shoe, have always a tendency to grow in, as they often do, producing inflammation and ulceration, and becoming very troublesome and difficult to heal. Indeed, a bad ingrowing toe Nail is among the most troublesome of the minor cases with which a surgeon has to deal; it can seldom be entirely cured without the removal of the Nail, and when this has become firmly imbedded in the flesh, it is no easy matter to extract it; then there is danger of inflammation, mortification, tetanus, and a whole train of evil consequences; there is usually a fungoid growth in and about the part of the toe where the Nail enters, and this must be destroyed by the free application of caustic; then, if the Nail be scraped thin, the edge may probably be lifted out, so that a small piece of scraped lint, or carded cotton, can be placed under, and prevent its penetrating again, so as to irritate and keep up the inflammation. Most surgeons recommend the entire removal of the Nail, or of that half of it to which the ingrowing edge belongs. The following mode of treating this painful and annoying complaint has been recommended by Mr. G. M. Humphry, a medical practitioner of Cambridge, who states that he has found it successful:—"Procure a piece of silver, rolled out sufficiently thin to admit of being bent to the required shape, yet sufficiently firm to bear moderate pressure. This should be nearly the length of the Nail, from a quarter to half-an-inch wide, and bent into somewhat of an S shape, or rather *a ∞ b*. The lower end (*b*) is, by the aid of a pair of forceps, to be carried down between the overhanging ulcerated skin and the Nail, and hooked under the rough edge of the latter. The upper end (*a*) is then carried outwards, and secured in that position by a strip of plaister, and a bandage round the toe. By this means, the inverted edge of the Nail and the skin are effectually kept from one another, and pressed in opposite directions. The Nail is a little elevated, and the fungoid growth very soon shrinks under the pressure of the metal, and assumes a healing aspect. After several days a marked improvement will generally be found to have taken place, when the silver may be readjusted, and allowed to remain on a longer time. Gradually the ulcer heals, and the Nail grows up in a more natural shape. It is well, however, to continue the use of the silver for some time; and after the sore is quite healed, a piece of lint, or a small

flat piece of silver, should be inserted under the edge of the Nail to prevent the tender cicatrix being fretted by it, and to keep down the skin. The patient should be directed to avoid tight shoes, and not to cut the corner of the Nail low down. In some bad cases it may be necessary to keep him quiet, or in bed, for a short time; and in a few to prepare the way for the silver by the insertion of a piece of lint, secured by a strip of plaster. By this plan, patients may be instructed to carry out their own cure; the size and exact shape of the piece of silver must be regulated according to the case; and some nicety of manipulation is required to insinuate it between the ulcerating skin and the Nail, and to hook it under the edge of the latter, without inflicting much pain in the exquisitely tender state of the joint.

The common employment of the hand on which they grow, will generally somewhat modify the shape and appearance of the Nails; but sometimes they are indicative of constitutional tendency; this is especially the case in the long transparent curved Nails of the consumptive.

NANCEIC ACID. An acid procured from sour rice, and other acescent vegetables, by Braconnêt, who named it as above in honour of his native town, Nancy.

NAPHTHA (a word of uncertain derivation, probably from *nafuta*, to push or throw out, as pastures,—to boil, or be angry). A bituminous liquid, which is thin, volatile, and inflammable, emitting a strong and very peculiar odour. It is a pure hydrocarbon, being a compound of 36 of carbon with 5 of hydrogen. It occurs in springs on the shores of the Caspian Sea, being formed probably by the action of heat upon beds of coal; and is also obtained by distillation from petroleum, as well as by dry distillation from wood, along with acetic acid, and tarry products. That, which is called the Medicinal Naphtha, or Wood Spirit, (*Spiritus Pyroxylicus*) has been employed as a stimulant, expectorant, and diaphoretic, in phthisis and chronic bronchitis, and also in gout and rheumatism, but with no very marked results; it has also been recommended in diarrhoea and dysentery; the dose is from 10 to 20 drops, three times a-day, in Milk or Mucilage; the dose may be gradually increased, if nausea is not produced; in bronchial affections it is sometimes inhaled. *Naphtha Nitri*, and *N. Vitrioli*, were old names for Nitric and Sulphuric Ether. *Naphthaline* is a compound obtained by distillation from coal tar; it is a white crystallizable substance, consisting of hydrogen and carbon, ex-

tremely volatile, and dissolving readily in alcohol, or ether, and combining with Sulphuric Acid, forming an acid which has been called the *Sulpho-Naphthalic*.

NARCOTICS (Greek *narke*, stupor). Medicines which induce sleep or stupor—sometimes called *Hypnotics*. This class includes anodynes, but not properly sedatives, because although in full doses they diminish the activity of the nervous system, and so produce sleep, yet they are also capable, if given in small and repeated doses, of exciting the nervous system, which sedatives will not. The following are the principal narcotics which are used in medical practice:—Aconite, Belladonna, Camphor, Conium (Hemlock), Hyoscyamus (Henbane), Indian Hemp, Lactucarium (Lettuce), Morphia, Opium, Poppy, Stramonium. They are all dangerous medicines, for one who is not well acquainted with their uses and effects, to meddle with; a reference to their several heads will show in what cases, and how they may be given.

The *Narcotico-Irritants* differ from the simple narcotics in having a direct action on the spinal marrow and nerves, as indicated by paralysis and convulsions; they also affect both the brain and alimentary canal; the chief poisons of this class are—Cocculus Indicus, Colchicum or Meadow Saffron, Digitalis or Foxglove, Hellebore, Nux Vomica, and Strichnine; the poisonous Mushrooms, Aconite, Belladonna, and Conium ought also to be included.

The simple *Narcotic Poisons* are chiefly Opium and its preparations, Alcohol and Ether, although under this denomination all those Narcotics previously mentioned might be classed; for symptoms of poisoning by these and modes of treatment, see *Poisons*.

NARCOTINE is the active principle of opium; it was formerly called *Salt of Derosne*; and *Narcine* is a principle discovered by Pelletier in opium, being identical with *Morphine* (which see).

NARIS (Latin for the nostril; plural *nares*).

NASUS (Latin for the nose), hence *nasal* belonging to the nose, and *naso-palatine* applied to nerves, &c. See *Nose*.

NATES (Latin for the buttocks). The name of the upper pair of the *tubercula quadrangemina* of the brain; the lower pair is called the *testis*.

NATRON. Impure or native carbonate of soda; it is sometimes called mineral *alkali*, from being found in mineral seams or crusts; it is of two kinds, the common and the radiated. See *Soda*.

NAUCLEA GAMBIR. A plant of the natural order *Rubiaceæ*, which yields the Malayan drug *Gambier*, similar in its properties to catechu or kino, if it be not identical with the former of these useful astringent substances.

NAUSEA (Greek *naus*, a ship). A term now commonly applied to sickness of the stomach, a loathing or tendency to reject, without actual vomiting, although its original signification was *Sea-sickness*.

The sensation of Nausea is usually referred to the stomach, and is no doubt commonly due to causes connected with that organ only; yet very frequently the feeling is sympathetic, having its origin in the brain or the nervous system; thus we know that a severe blow on the head, a dislocation, or other injury to any part of the body, attended with severe pain, will occasion Nausea: so will horrible and disgusting sights, and sounds, and odours, or anything which affects the brain through the medium of the senses. The Nausea of pregnancy, too, appears to be purely sympathetic, and the action of emetics must be attributed rather to their influence on the nervous system, than directly on the stomach; for it has been found that they act as well when injected into the veins as when swallowed. So we find that gall-stones in the kidneys, tumours in the womb, and many other diseased conditions of the various organs, give rise to a feeling of sickness—all showing that this feeling is, in many cases, merely sympathetic. The relaxed state of the nervous, and consequently of the muscular system, which attends Nausea, is favourable to the performance of certain surgical operations, such as the reduction of dislocations, ruptures, or constrictions: hence surgeons, previous to such, often produce it artificially by the administration of tartar emetic.

The proper *remedies* for Nausea, of course, will depend upon the causes; if it proceeds from affection of the brain, but little can be done to relieve it; if from disorder of the stomach, free vomiting, which may be easily excited by warm water and a little Ipecacuanha, or merely tickling the fauces with a feather, or a brisk purgative, will afford relief; if occasioned by some nervous shock to the system, a glass of Sherry Wine or a little Brandy, or some other nervous stimulant. In any case, effervescing draughts made with Carbonate of Soda and Lemon-juice will be grateful, and probably effectual; if other means fail, a Mustard Plaister to the pit of the stomach may be tried; or Creosote, in drop doses, rubbed down with a little Sugar or Gum; or a Mixture like

this—Hydrocyanic Acid, 12 drops; Acetate of Morphine, 1 grain; Carbonate of Soda, 1 drachm, in Water, 6 ounces: take a tablespoonful every three hours. A drop of the above acid, or of Creosote in Soda Water, is also likely to be of service. A reclining position is best for the patient; and perfect quietude, both of body and mind, especially when the affection has a nervous origin.

NAVEL. The centre of the lower part of the abdomen, being the point where the umbilical cord passes out of the foetus; this cord is a collection of vessels by which the foetus of an animal is attached to the placenta, and communicates with the parent, receiving all necessary nutriment through this channel, previous to its independent existence; the arteries and veins of which the cord is composed are slightly twisted upon each other, and are capable of considerable extension without giving way. When the child is born, this navel-string has to be severed and tied; and in a short time it sloughs and comes away, leaving the indentation in the belly, which we commonly call the navel. See *Labour*, *Rupture*, *Umbilicus*.

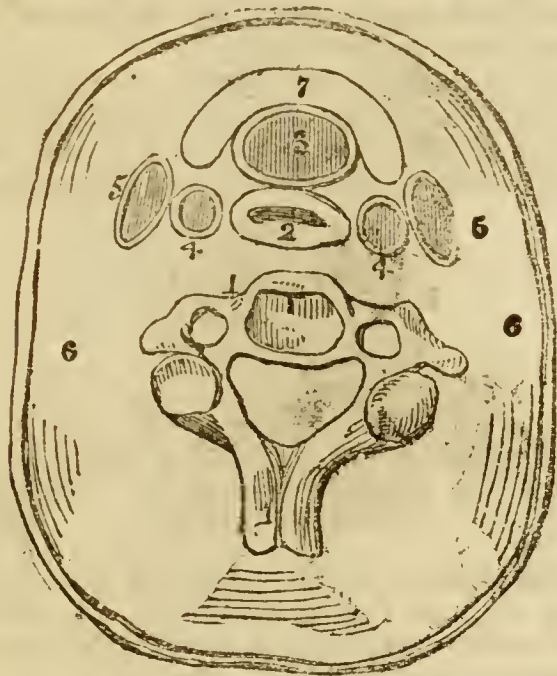
NAVICULAR (Latin *navicula*, diminutive of *navis*, a boat). A bone of the carpus, and also of the tarsus, is so called, because of its supposed boat-like shape.

NEAR SIGHT. Scientifically called *Myopia*. See *Sight*.

NEBULA (Latin for a cloud). Haziness of sight, proceeding from opacity of the cornea. See *Eye*, *Sight*.

NECK. Between the head and the trunk of the body is situated, as our readers are aware, the Neck, one of the most important parts of the whole human frame: an isthmus over, or rather through, which passes all the traffic of the circulatory system; all the food that nourishes; all the air that energizes and vitalizes what were else but dead and inert matter; all the countless messages that are constantly passing, and repassing between the organs of sensation and the brain, go by this channel, and no other; cut off the communication here, and the heart would cease to pulsate, the lungs to inhale and exhale, the muscles to contract and extend, and the nerves, throughout all their minute ramifications, would lose their exquisite sensibility; in short, there would be a stoppage to life and its operations altogether. The following diagram, which represents a transverse section of the Neck, will serve to show the position of the several important organs of which it is constituted. The whole of the figure marked 1, is one of the

vertebræ, or joints of the great spinal column; in front of this lies the œsophagus, or gullet, 2, somewhat flattened, as in a state of rest; the opening marked 3, before the gullet, is the wind-pipe; on either side are the great vessels of the Neck; 4, 4, being the carotid arteries, and 5, 5, the internal jugular veins. These, with the



nerves, glands, the external jugular veins, and muscles of the Neck, are enclosed within the skin marked by the double line and figures 6, 6; in front of the wind-pipe lies the thyroid gland, 7, whose enlargement causes swelled Neck, or *Bronchocele* (which see).

The diseases to which all these organs are liable, are spoken of under their several heads, therefore we need not enlarge upon them here, but a few remarks upon the general bearings of our subject seem to be desirable; 1, as to the common form of the Neck: if short, and thick, as it usually is with plethoric persons, it indicates a tendency to apoplexy; persons who have this form of Neck should carefully avoid all excesses and irregularities of living, and also any pressure upon the vessels of the throat and parts adjacent; the mere buttoning a shirt collar too tightly will sometimes suffice to bring on an attack, and especially if the head is turned aside so as to cause strong pressure of the muscles on particular vessels, damming up, as it were, the current, and impeding the flow of blood. For this reason, those who are liable to over-fulness of the veins of the head, should avoid all sudden and violent movements of that part, and on no account should they go to sleep with anything tied or buttoned round the neck; indeed, with all persons,

this part should be left free. Nurses should be cautioned against tying the night-caps of children at all tightly, as serious mischief is likely to result from this practice.

What is called *Stiff-neck* is the result of rheumatic affection of the muscles, it may generally be relieved by stimulating applications, such as Hartshorn and Oil, or Camphor and Soap Liniment, well rubbed in; it is very painful while it lasts, which it seldom does for any length of time if the proper remedies be used. (See *Rheumatism*.)

Wry Neck is a more permanent affection, resulting from the undue contraction of one or more of the muscles on one side of the Neck, or it may be paralysis of these muscles, permitting those on the other side to draw the head down. A surgical operation is the only remedy in either case.

NECROSCOPICAL (Greek *nekros*, dead; and *skopio*, to examine). Relating to post-mortem, or after-death, examination.

NECROSIS (*nekroo*, to mortify). Mortification is the literal meaning of this term, which, in modern science, is restricted to caries or ulceration of the bones. It may be *simple*, as when it is confined to one bone, the patient being in other respects healthy, or *compound*, when several parts of the same bone, or several distinct bones, are affected; or when, in addition to this affection, the general health is bad. There is also a kind called *Necrosis ustilaginea*, which is that species of mortification of the bone which arises from the use of grain infected by *ustilago* or blight. See *Ergotism*, also *Bones*.

NEGRO CACHEXY. This is the *Mal d'estomac* of the French. The propensity for eating dirt peculiar to the natives of the West Indies and Africa; we sometimes see a similar propensity manifested by females in this country affected by *chlorosis*.

NEPENTHE (Greek *ne not*, and *penthos* grief). The ancient name of a drug mentioned by Homer; it was probably opium; hence in the old Pharmacopœias we find opiate pills termed *Nepenthes Opiatum*.

NEPHROS (Greek for a kidney). Hence we have the terms *Nephralgia*, pain of the kidneys from calculus; *Nephritis*, a term applied to medicines which act on the kidney; *Nephritis*, inflammation of the kidney; *Nephrotomy*, the operation of cutting a stone out of the *Kidney* (which see).

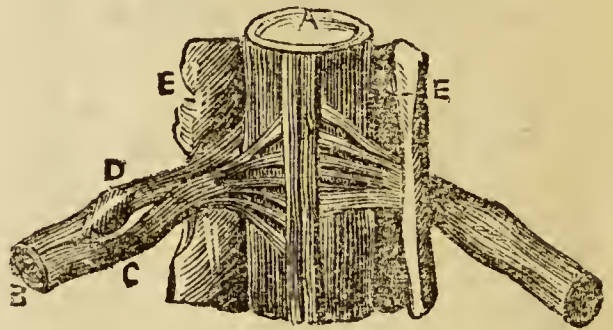
NEROLI (from *neranti*, a name of the orange tree). A perfume consisting of the essential oil of orange flowers.

NERVES (Latin *nervus*, a string). These are cord-like substances arising from the brain or spinal marrow, and distributed to

every part of the system: they are of two kinds, one white and opaque in appearance, and presenting, under the microscope, a tubular or fibrous structure, and the other of a reddish grey colour, semi-transparent, and consisting of cells or vesicles filled with granular matter; these latter kind of Nerves are but sparingly distributed in proportion to the former, and appear to form the apparatus by which the nervous force or energy is generated, to be conducted through the tubular substance to the points of action; we may shortly state, then, of these two kinds of Nerves, that one gives feeling, and the other motion; and of the whole nervous system of the human body, that it is composed of the brain and cranial Nerves; the spinal cord, and spinal Nerves, and the sympathetic Nerves. Of the structure of the brain we have already spoken under that head; of the spinal cord or marrow we may here briefly say that it is composed of a whitish substance similar to that of the brain, and is covered with a sheath or membrane, which extends from the former organ through the whole length of the spinal

the seventh pair, passing to the muscles of the face, 13; the eighth pair, Nerves of hearing, 14; the ninth, tenth, eleventh, and twelfth pairs, which pass to the tongue, larynx, and neck, 15, 16, 18, 19; and 20 indicates two of the spinal Nerves, which latter are arranged in thirty-two pairs, each arising by two roots, the one called the anterior or motor root, and the other the posterior or sensitive root.

In the next diagram, we have a representation of the spinal cord; surrounded by its sheath, marked by the letters E E, the cord itself being represented by A; B is a spinal



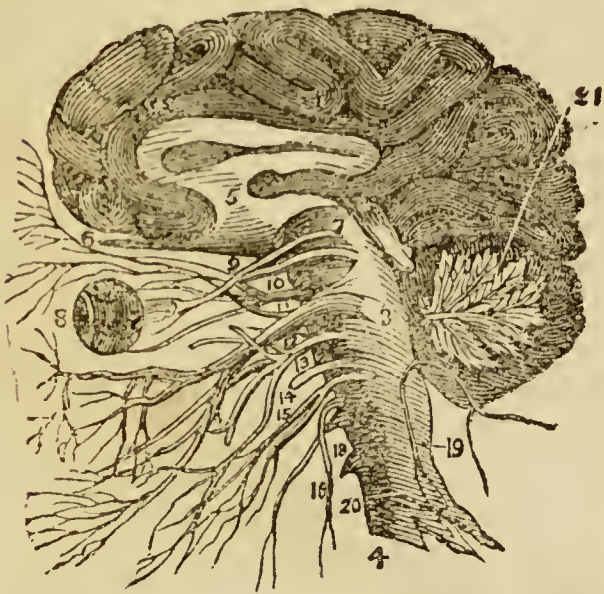
nerve, formed by the union of the motor root (C) and the sensitive root (D) where the knot or ganglion is seen. (For a clearer figure of this, see vol. I., page 312.)

The sympathetic Nerve consists of a series of these ganglia, or knots, which extend down each side of the spinal column, forming a kind of chain throughout its whole length communicating to both the cranial and spinal nerves, and distributing branches to all the internal organs.

These Nerves, then, are undoubtedly the organs of feeling and sensation of every kind; through them the mind operates upon the body. The intelligent mind, whatever that may be, whose seat is in the brain, *wills* that a certain action shall be performed, and instantly through the main channel of communication, the spinal cord, the message flies, branching off here or there according to the direction in which the work is to be done, and setting in motion the muscles which perform it.

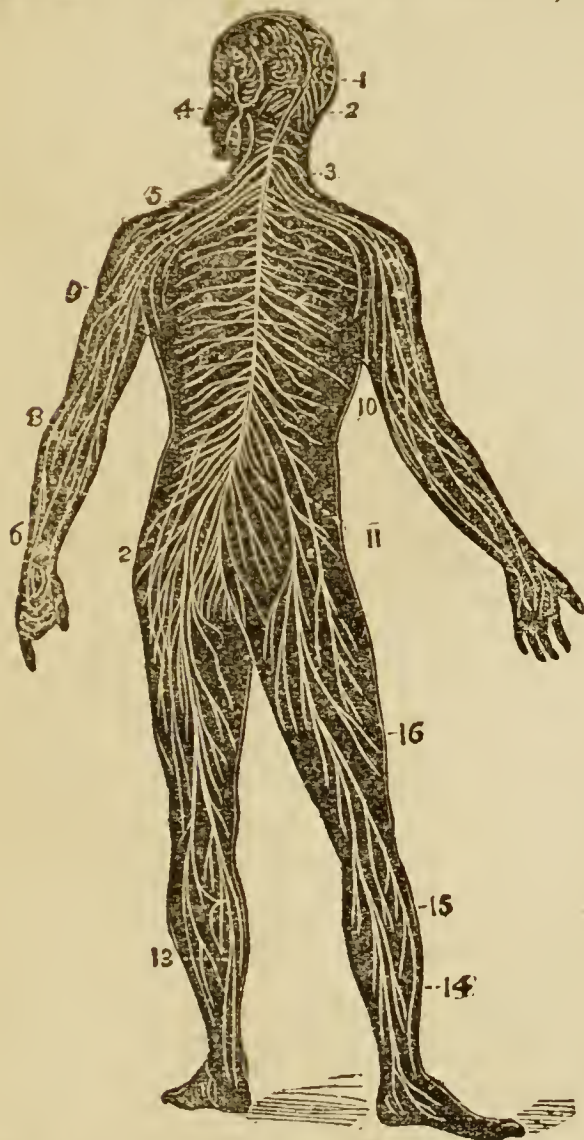
The annexed diagram will give our readers a good idea of the way in which the nerves spread and ramify throughout the body; it represents a back view of the brain and spinal cord. 1, is the cerebrum; 2, cerebellum; 3, spinal cord; 4, nerves of the face; 5, the brachial plexus or union of nerves; 6, 7, 8, 9, nerves of the arm; 10, those that pass under the ribs; 11, lumbar plexus; 12, sacral plexus; 13, 14, 15, 16, nerves of the lower limbs.

It is scarcely necessary for us here to go more deeply into the structure of the Nervous



column. The above section of the brain and spinal cord, shows the relation of the cranial Nerves to these organs, and to those of the senses to which they belong; 1, is the part of the brain called the cerebrum; 2, the cerebellum with its foliated portion, sometimes termed *arbor vitæ*; 3, is the medulla oblongata (oblong marrow), which forms the top of the spinal cord, which is represented by 4 and 5; the first pair, or Nerves of smell, are marked by 6; the second pair, or Nerves of sight, by 7 and 8; the third, fourth, and sixth pairs, which pass to the muscles of the eye, 9, 10, and 12; the fifth pair, Nerves of taste, which are also the sensitive nerves of the teeth, 11;

fibres, and cells, else might we state many curious and interesting facts concerning this part of the animal economy. Some idea of their nature and the beauty of their arrangement may be seen by the foregoing diagrams. Like the veins and arteries, they



spring from great main-channels, which may be compared to the stem and arms of a tree, and branch out from thence in every direction, dividing and subdividing into the most minute ramifications; so that you cannot so much as prick any part of the surface of the body but pain is felt, a sure evidence that a Nerve has been touched; nay, so much as a breeze cannot blow upon the body, nor the wing of an insect touch it, but the Nerves give information thereof to the brain, and the mind is made aware of the cause and takes its measures accordingly. Delicate strings are these Nerves of an instrument of exquisite sensibility, so delicate as to be sometimes invisible to the unassisted vision, that in many parts we are only made aware of their presence by the effects which they produce; they take cognizance of the slightest sound, the faintest ray of light,

the least change in the constitution of the air we breathe, and of the food we eat; they are the vigilant sentinels ever watching to guard the body from danger; the constant ministers to its pleasure and delight; often are they attacked and abused, their fine sensibilities deadened and perverted, so that they become subject to disease and avenge the injury done to them by a train of the direst sufferings to which humanity is liable.

This brings us to speak of *Nervous Diseases*; and first of that which is commonly designated *Nervousness*, a malady very rife among persons of sedentary habits, or those who have exhausted the brain by severe mental labour, or weakened the bodily powers by drink and dissipation. The man who leads an active, open air life, and lives temperately, is seldom or ever the victim of this distressing malady; nor the active bustling woman, who does her duty in that state of life in which it has pleased God to place her, and meets trials and troubles with cheerfulness and resignation. Nervous people are peevish and pining, having an unsound mind in an unsound body; and very commonly they have themselves only to thank for this miserable condition; they have in some way violated the laws of health generally, but not always; they may be the offsprings of a sickly and nervous stock, or they may have fallen into this state through disease, or some unavoidable overtaxing of their bodily or mental powers. In any case they are greatly to be pitied, and, if possible, relieved of these distressing symptoms, which poison the springs of earthly enjoyment, and make life a burden, rather than a blessing. Great susceptibility to external influences marks this state of nervousness, any unwonted sound or unusual sight, will set the heart palpitating, the head throbbing, the hand trembling; little troubles and difficulties are magnified, and mental emotions, of whatsoever kind, seem to overpower the mind. The resort in this case, is too commonly alcoholic stimulants, which, although they may stupify the senses, and deaden the nervous susceptibility for a time, yet produce a corresponding depression when the reaction comes on, and render both mind and body less capable of struggling against the malady. It is not to be denied but that these may be employed as remedies in nervous diseases, and with much advantage, but it is not safe for the patient to use them at his own discretion, nor must they be substituted for the more permanent means of invigorating the system, such as regular open air exer-

cise, sea bathing, cheerful society, and strengthening medicines, such as Quinine and preparations of Iron. Attention must be paid to the state of the bowels, as any irregularity there will, it is likely, tend to keep up nervous irritability, and counteract the efforts made for the patient's benefit. If purgatives are required, they should be of a warm stimulating character, such as Rhubarb with Ginger or Peppermint. Tincture of Valerian and Aromatic Spirits of Ammonia, are good nervous stimulants, and should be combined with the tonics administered. With women nervousness is commonly associated with hysteria; it sometimes attends a weakened state of the system from too rapid child-bearing, and with all occasionally merges into a state of hopeless *Hypochondriasis* (which see); also *Neuralgia*, *Tic Doloroux*, *St. Vitus's Dance*, *Brow Ague*, *Sciatica*, all of which are forms of Nervous Disease.

NERVINES. (Latin *nervinus*, from *nervus*, a nerve). Medicines which relieve nervous disorders, such as anti-spasmodic, &c.; they are sometimes called *Neurotics*.

NERVOUS QUINSY is a name sometimes applied to a form of Hysteria, the *Globus Hystericus* of Dr. Darwin, and some other writers.

NETTLE. This is a plant too well known to need any description; it belongs to the natural order *Urticaceæ*, whose principal characteristic is the acidity of their limpid juice, owing, it seems likely, to the presence of bicarbonate of ammonia in excess, although some say it is free formic acid. The commonest species of the tribe with us

is the Great Nettle (*Urtica Dioica*) which overruns all waste places, and is a perfect pest to the farmer, invading with its winged seeds the cultivated grounds. It is questionable, however, whether its useful qualities do not more than counterbalance the disadvantages attending its prolific growth: from time immemorial its fibres have been used in the manufacture of textile fabrics, and it now appears to be coming into extensive use as a material for paper; its root yields a colouring matter; in some countries it is largely cultivated as fodder for cattle; the seeds serve to fatten fowls, and are said to infuse life and spirit into horses; the young shoots in spring supply a wholesome vegetable, when boiled like other greens; and, what is more to our purpose, the whole plant has been considered anti-asthmatic, aperient, astringent, emmenagogue, excitant, and lithontriptic. A decoction of the leaves, under the name of "Nettle Tea," has been a favourite purifying and antiscorbutic drink among country people from time immemorial. Culpepper says that it "killeth worms in children," and ascribes to it marvellous efficacy, in a variety of diseases; but it has nearly dropped out of modern practice with many of the "herbs" which were reckoned "medicinal" in less enlightened ages. Still the old woman's nettle tea is not to be despised, when other and better remedies cannot be readily procured. The small Nettle (*U. urens*), often found on cultivated grounds, stings more violently than the large one; and the *U. pilulifera*, another and rarer kind, is yet more virulent in its poison, and the fresh juice of the Nettle has been found serviceable in internal hæmorrhage, especially from the lungs and womb.

NETTLE RASH is an eruption of the skin, similar to that produced by the sting of Nettles, consisting of solid eminences, or wheals of an oblong shape: it is characterized by a burning and tingling sensation with great irritation, heat, and itching. It is generally thrown out by some particular kind of food which disagrees with the system, such as crabs, or other shell-fish, or mackerel; certain vegetables are likely to produce it, such as mushrooms, cucumbers, bitter almonds, or strawberries. Copaiba, cubeb, valerian, or the fumes of turpentine inhaled during a house painting, are also likely to occasion Nettle Rash.

Of this disease there are two varieties, distinguished as the *acute* and *chronic*: the first runs a short and rapid course, and is attended by febrile symptoms. An emetic should be first administered if the eruption



is caused by anything recently taken into the stomach; it should be followed by a saline aperient—Senna Mixture, with Salts, is perhaps best, and this repeated until the bowels are freely moved; if the febrile symptoms do not subside, a mixture composed of Sweet Spirits of Nitre, 2 drachms; Liquor of Acetate of Ammonia, 1 ounce; and Camphor Mixture, 5 ounces, should be given, two table-spoonsful every four hours; a small dose of Calomel may also be required. In the chronic form, a simple diet, active exercise, an avoidance of any articles of diet likely to excite the eruption; keeping the bowels regular, by gentle aperients, combined with anti-acids; a 5-grain Rhubarb pill an hour before dinner, or a small piece of the root chewed are good remedial means; the tepid bath should be occasionally used, or sponging, to keep the skin in a healthy state; to allay the irritations, dust Starch-powder over the eruptions; or use a lotion made of Rose or Elder Flower Water in half a pint of which has been dissolved, 1 drachm of Carbonate of Ammonia, and half a drachm of Sugar of Lead.

NEURALGIA (Greek *neuron*, a nerve, and *algos*, pain). A painful affection of the nerves: when it occurs in those of the face it is termed *face-ague*, or *tic-doloureux*; when it affects the great nerve of the leg, it is called *sciatica*: other parts, such as the fingers, the chest, the abdomen, &c., are also liable to this agonizing pain, one of the most severe and wearing to which the human frame is liable; the exact nature of it is not very clear; that is to say, the origin of the disease, for although its immediate seat is a nerve, or set of nerves, yet there must be some originating cause. It can frequently be traced to some decay, or diseased growth of the bone about those parts through which the nerves pass; and in some severe cases it has been found to depend upon the irritation caused by foreign bodies acting upon those highly sensitive organs. The only symptom of Neuralgia generally, is a violent darting and plunging pain, which comes on in paroxysms; except in very severe and protracted cases, there is no outward redness nor swelling to mark the seat of the pain, neither is there usually constitutional derangement, other than that which may be caused by want of rest, and the extreme agony of the suffering while it lasts, which may be from one, to two or three hours, or even more, but it is not commonly so long. Tenderness and swelling of the part sometimes occurs, where there has been a frequent recurrence and long continuance of the pain, which leaves the patient, in most cases, as

suddenly as it comes on; its periodic returns and remissions, and absence of inflammatory symptoms, are distinctive marks of the disease. Among its exciting causes, we may mention exposure to damp, and cold, especially if combined with malaria; and to these influences a person with a debilitated constitution will be more subject than another. Anxiety of mind will sometimes bring it on, and so will a disordered state of the stomach, more particularly a state in which there is too much acid.

As for *treatment*, that of course must depend upon the cause; if it is a decayed tooth, which, by its exposure of the nerve to the action of the atmosphere, sets up this pain, it should be at once removed, as there will be little peace for the patient until it is: if co-existent with Neuralgia there is a disordered stomach, suspicion should at once point thereto, and efforts should be made to correct the disorder there. If the patient is living in a moist, low situation, he should at once be removed to a higher level, and a dry gravelly soil. Tonics, such as Quinine, and Iron, should be given, and a tolerably generous diet, but without excess of any kind. In facial Neuralgia, blisters behind the ears, or at the back of the neck, have been found serviceable; and, if the course of the nerve which appears to be the seat of mischief, can be traced, a Belladonna plaster, or a piece of rag soaked in Laudanum and laid along it, will sometimes give relief; so will hot fomentations of poppies and camomiles, or bran poultices sprinkled with turpentine. In very severe cases $\frac{1}{4}$ of a grain of Morphine may be given to deaden the nervous sensibility, and induce sleep, which the patient is often deprived of at night, the pain coming on as soon as he gets warm in bed. Sir Charles Bell's remedy for obstinate cases of Neuralgia, was 1 or 2 drops of Croton Oil, mixed with 1 drachm of Compound Colocynthis Pill, divide into 12. Weakly persons, however, must not venture upon taking this powerful remedy.

An application of Chloroform on lint has sometimes proved very effectual in relieving severe Neuralgic pains, and so has an ointment composed of Lard and Veratrine, in the proportion of 6 grains to the ounce.

A mixture of Chloroform and Aconite has been recommended for facial Neuralgia, the form of preparation being 2 parts of Spirits of Wine, or Eau de Cologne, 1 of Chloroform, and 1 of Tincture of Aconite, to be applied to the gums of the side affected, by means of a finger covered with a piece of lint, or soft linen, and rubbed along them; the

danger of dropping any into the mouth being thus avoided. When the pain is connected with some organic disease, as a decayed tooth, or chronic inflammation of the gums, or of the sockets, or superficial necrosis of the bone, substitute Tincture of Iodine for the Spirit in the above formula. We would caution our readers strongly against the careless inhalation of Chloroform, as a remedy for Neuralgia, which appears to be growing into a general practice; several deaths have resulted from it, the practice being to pour a little on a pocket-handkerchief, without much regard to quantity, and hold it to the mouth until the required insensibility is produced. This remedy should never be administered, except under the supervision of the medical adviser.

Persons at all liable to this painful affection should be extremely careful not to expose themselves to wet or cold; above all, not to sit in draughts; a very slight cause will often bring it on, where there is the least tendency to it.

One severe and troublesome form of Neuralgia is *Ear-ache* (which see); it often occurs in children at the time of dentition; it may be distinguished from that of an inflammatory character, resulting from the formation of an abscess, by the symptoms above described: (for *treatment*, see *Ear-ache*.)

NEURILEMMA, the sheath of a nerve; *Neurology*, the doctrine of the nerves; *Neurosis*, nervous diseases; *Neurotics*, nervous medicines; *Neurotomy*, dissection of the nerves. These are all terms which come from the same Greek root *neuron*, a nerve.

NEUTRALIZATION. A chemical term expressing the effect produced when an acid and an alkali are combined, in such proportions, that the former loses its acid properties; this process is exemplified in the preparation of the Liquor of Acetate of Ammonia, on which the acetic acid is neutralized by carbonate of ammonia, giving off carbonic acid gas in the effervescence, which takes place in the mixture of the two substances. *Neutral salts* are those in which the base is perfectly saturated with the alkali, so that they possess neither an acid nor an alkaline property.

NICOTINE. A peculiar principle obtained by Vauquelin from *Tobacco* (which see).

NICTITATIO (Latin *nictito*, to wink). Twinkling of the eyelids, commonly called *Winking* (which see).

NIGHT-BLINDNESS. This is a kind of amaurosis affecting those chiefly whose eyes are much tried by exposure to a strong glare during the day; as might be expected, it

prevails most in southern climates. Persons affected by it find their sight completely, or partially, fail them as night approaches. Sometimes the disease is congenital, proceeding from a defect in the optic nerve; in this latter case, no treatment can be of service; in the former, protecting the eye for a time from the action of strong light, and strengthening the system, if it be weakly, with tonics, good diet, and sea-bathing, will sometimes effect a cure. See *Amaurosis, Eye*.

NIGHTMARE. A sense of weight and oppression at the chest, felt at night, and generally preceded by a frightful dream, in which the sleeper fancies himself on the edge of a precipice, or struggling for his life with some enemy in the form of a fiend or dreadful beast, from which he makes desperate but fruitless efforts to escape. The cause is, generally, indigestion; it may be owing to distension of the stomach by flatulency, or lying in a cramped and uneasy position; sometimes it is occasioned by great mental disquietude or irritation, or over fatigue. The best remedies are avoidance of late and solid suppers, attention to the state of the bowels, and, of course, any other of the above-mentioned exciting causes.

NIGHTSHADE. A common name of the plant more usually described in medical works under the name of *Belladonna*, (which see).

NIGRITIES (Latin *niger*, black). A term applied to blackness or discoloration of a part, thus a caries is called *Nigrities ossium*, blackness of the bone.

NIPPLE. The prominent part in the centre of the areola of the mamma, or *Breast* (which see), and *Papilla*.

NIRLES. A popular name for a kind of *Herpes* (which see), and *Skin Disease*.

NITRATE (Latin *nitras*). A compound of nitric acid with any salt as a basis. Many of the Nitrates are valuable as remedial agents: the chief of them are Nitrate of Potash, commonly called Nitre or Saltpetre; *Nitrate of Soda*, formerly more used than it is now, and termed Cubic, or Quadrangular Nitre; *Nitrate of Lime*, formerly called Calcareous Nitre, or, when ignited, Baldwin's Phosphorus; *Nitrate of Ammonia*, formerly termed Flaming Nitre, from its property of exploding at a high temperature; *Nitrate of Magnesia*, or *Magnesian Nitre*, combined with the former, it forms a triple salt termed *Ammoniaco-Magnesian Nitrate*; *Nitrate of Silver*, or as it is now generally called, Lunar Caustic. These preparations are more fully described under the several substances which form their bases.

NITRE. This, or *Saltpetre*, is the common name of the Nitrate of Potash, when melted and poured into moulds it is termed *Sal-prunella*, in old works *Crystal Mineral*; when mixed with charcoal and burnt, it leaves a residuum to which the name *Clysus of Nitre* was formerly applied; when mixed with carbonate of potash and sulphur in a warm mortar, it forms the *Fulminating Powder*; combined with charcoal and sulphur it is *Gunpowder*; or with sulphur and fine sawdust, constitutes the *Powder of Fusion*, of old chemical writers.

NITRIC ACID, commonly termed *Aqua-fortis*, on account of its corrosive qualities; it consists of 100 parts of nitrogen, and 250 of oxygen, by volume, or 40 of the former to 16 of the latter by weight. We have already spoken of the salts of this acid under the name *Nitrate* (which see), also *Acids*. *Nitro-Muriatic* and *Nitrous Acid*, are also described under the latter head. *Nitro-Leucine Acid*, is an acid formed by treating Leucine with Nitric acid, and *Nitro-saccharic Acid* is procured from the sugar of gelatine.

NITROGEN (Greek *nitron* nitre, and *gennaō*, to produce). This is one of the elementary gases, and a large constituent of our atmosphere, of which it forms nearly four-fifths; it enters into numerous chemical combinations, and is one of the chief sources of nutrition to the human system; its existence in animal matters was, until quite recently, thought to constitute the great point of difference between them and the products of vegetation; modern science, however, has demonstrated that it is present in the latter substances, although in a comparatively small amount; and yet it appears likely that animals obtain their nitrogen chiefly from the vegetables on which they feed, these constituting the medium of its conveyance from the inorganic to the higher grades of the organic kingdom. Nitrogen is a gas altogether destitute of colour, taste, or smell. In a pure state it is incapable of supporting combustion or animal respiration, yet it cannot be called absolutely poisonous; it is especially necessary to the formation of muscular fibre. Of vegetable food, the greens containing gluten, have most of it. Chemists sometimes call this gas *Azote* (which see), and *Gas*.

NOCTAMBULATIO (Latin *nox* or *noctes*, night, and *ambulo*, to walk). A term applied to sleep-walking. See *Somnambulism*.

NOCTURNAL EMISSIONS. These, to which young men are sometimes especially liable, often cause more alarm than there really is

any occasion for: they are involuntary discharges of the seminal fluid, and are likely to occur when the organs are excited by dreams, or imaginations of a certain character. Unless they become frequent and profuse, there is no reason for regarding them with the morbid feeling of anxiety which they commonly occasion; still such discharges should be attended to and checked as much as possible; they, generally, indicate a debilitated system, and are in, perhaps, most cases, the result of criminal self-indulgence and venereal excesses, from which those, thus affected, should rigorously abstain. A course of tonic medicines should be taken, nothing is so good as the Muriated Tincture of Iron with Quinine, about 1 grain of the latter, with 10 drops of the former, in a little water, three times a-day. Sea bathing, or the shower bath, regular, but not excessive exercise, a sufficiently nourishing, but not a stimulating diet, with gentle aperient medicines, if required (avoiding Aloes), are the proper remedial measures.

Persons affected in this way often get into a painfully nervous state, and, conscious that they are but reaping the reward of bad practices, are ashamed to state their cases to a respectable medical man, and, therefore, fly to advertising quacks, who promise secrecy and a rapid cure. But this is a great mistake; there can be no rapid cure for involuntary seminal discharges, except it be by such powerful medicines, as will do great mischief to the system of the patient, and, probably, render his organic weakness permanent. In nine cases out of ten a temporary stoppage of the discharge even, is not accomplished by the much vaunted Balm of Syriacum, and other nostrums, so quickly as it would be by the means above recommended, or others which the legitimate practitioner might deem suitable for the peculiar case, and no after ill effects are to be apprehended from such treatment.

NODES (Latin *nodus*, a knot). These are enlargements of bones, chiefly those which are superficial or merely covered with skin, such as the jaw, collar bone, or shin; they arise from inflammation of the periosteum, and have generally a syphilitic origin, although this cannot be called an absolute rule, as they have sometimes existed where there could have been no such contamination of the blood. See *Bone*, *Exostosis*.

NOISE IN THE EARS. This may proceed from excessive sensibility of the nerves surrounding the carotid artery where it passes through the temporal bone, and may be a

symptom of general nervous excitability, or of fulness of blood in the veins of the head; in the former case Leeching or Cupping on the temple, with general depletive measures should be resorted to; in the latter, tonics and nervous stimulants will have to be taken; it is important to distinguish the cause of these noises, as in the two cases mentioned the treatment is very dissimilar.

NOLI ME TANGERE (Latin for Touch me not). A name given by some writers to Lupus, a skin disease, included in the seventh genus of the *Tuberculae* of Bateman; termed by Sauvages *Cancer lupus*, and by other French writers *Dartre rougeante*. A common name for it is Corroding Tetter. See *Lupus*.

NOSCOMIUM (Greek *nosos*, a disease, and *komeo*, to take care of). A place where sick people are tended and cared for; an hospital.

NOSE. By many persons, we imagine, the Nose is looked upon rather as an ornamental than as a useful appendage to the face, and some we have heard complain of it as a great nuisance, always getting in the way, being injured, and requiring the constant use of pocket handkerchiefs; it is, however, an organ most essential to the wellbeing of the whole animal economy; one, and perhaps not the least important, of the "five gateways of knowledge," as Dr. Wilson has poetically termed the organs of the senses; by its aid we are enabled at once to detect the approach of danger in its most insidious form, that of gas or vapour mingled with the air we breathe; situated as it is immediately above the mouth it takes cognizance of all matters which enter there, and warns the brain or the mind, whichever we please to call it, of anything deleterious which may be combined with them. By the Nose, too, we are made conscious of the presence or approach of danger in the shape of fire, and in some conditions of life, in which the sense has to be especially cultivated, it proves the most unerring guide, and the greatest safeguard of any of the senses. Then who shall say that it does not minister largely to our pleasure, both animal and intellectual. By means of it we anticipate and so double the enjoyments of appetite, and without it all the delightful vegetable perfumes, odours which God has caused to emanate from the flowers, and which the art of man has simulated, would be inappreciable, and, therefore, useless. With the lower animals this organ is all-important; it guides them in the selection of food and drink, enables them to distinguish what is noxious from what is wholesome;

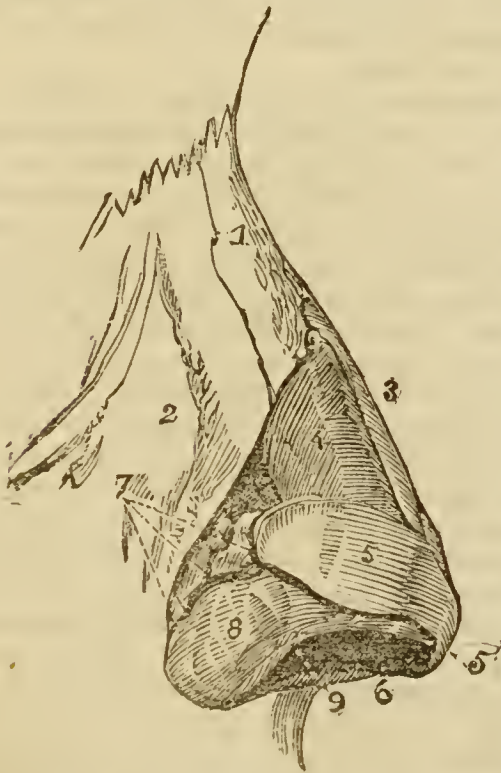
by its gratification renders food more welcome; and in many cases enables them to find out it, and their companions, where the eye and the ear would be of no avail. "Sofar," says Dr. Wilson, "as the nostril is a utilitarian organ to man, its services may be described in a few words. I have not seen it anywhere laid down as a general rule, but I believe it might be affirmed that we are intended to be impressed only sparingly and transiently by odours. There is a provision for this in the fact that all odours are vapours, or gases, or otherwise volatile substances, so that they but touch the inside of the nostril, and then pass away.

"In conformity with the fleeting character of odorous bodies, it is a law in reference to ourselves—to which, as far as I know, there is no exception—that there is not any substance having a powerful smell, of which it is safe to take much internally. The most familiar poisonous vegetables, such as the poppy, hemlock, henbane, monks'-hood, and the plants containing prussic acid, have all a strong and peculiar smell; nitric, muriatic, acetic, and other corrosive acids, have characteristic potent odours, and are all poisons. Even bodies with agreeable odours, like oil of roses, or cinnamon, or lavender, are wholesome only in very small quantities; and where the odour is repulsive, only in the smallest quantities. From all this, we may learn that so far as health is concerned, the nostril should be but sparingly gratified with pleasing odours, or distressed by ungrateful ones. No greater mistake can be made in sick rooms than dealing largely in aromatic vinegar, eau-de-Cologne, lavender water, and other perfumes. This hiding of one odour by another, is like trying to take away the taste of bitter aloes by that of Epsom salts. Physical comfort is best secured by rarely permitting an infraction of the rule, that the condition of health is no odour at all.

"Turning from this lowest and least attractive aspect of the sense of smell, to one which acquires a higher importance from the moral considerations which in some respects it involves, it is of interest to notice how much longer we tolerate a forbidding odour, than we relish a grateful one. Perfumes quickly pall upon us, and we loathe the concentrated essence of even the sweetest flowers. But, in their daily callings, men submit without a murmur to the most repulsive effluvia, and work even cheerfully amidst noisome gases. In the one case, we seek pleasure, and are disappointed because the nerves of smell, dulled by the first im-

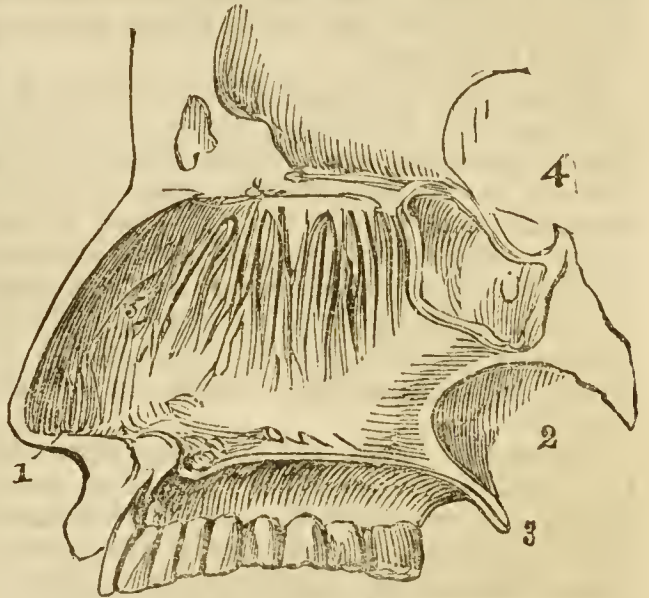
pression upon them, cannot with equal sensitiveness respond to a second; in the other, for the same reason, we can suffer without discomfort the diminished sharpness of the irritation, whose sharpest provocations are its first. There is thus a physical reason why we should tire of a smell once pleasant, and grow indifferent to a smell now unwelcome. There is a moral reason also; for, in the one case, we think of pleasure, in the other of duty. The palling perfume tells us that but little of our lives may be spent in merely pleasing our senses; the tolerated infection bids us sit by the sick man's side, and set the preciousness of his life over against the little discomfort to ourselves; and so it is, that while the listless voluptuary flings away the rose, which has become scentless to him, the metal-worker labours heartily among the vapours from his crucibles and refining vessels; and the bleacher inhales, without a murmur, the fumes of his chlorine; while, most tried of all, the busy anatomist asks no one for pity, but forgets the noisome odours about him, in delight at the exquisite structures which he is tracing; and the heroic physician thinks only of the lives he can save." Thus much have we thought it desirable to adduce in relation to the sense of smell itself: let us now return to the organ of this sense, and as briefly as is consistent with clearness, point out its peculiarities of structure.

The framework of the Nose, or that part which can be seen externally, is made up



of thin bone, or fibro-cartilage, as it is termed by surgeons, the latter forming entirely the

expanse of the nostrils. In the following cut we have a representation of the outer part of this organ, as viewed from the side: 1, is the nasal bone; 2, the nasal process of the upper maxillary bone; 3, the cartilage of the septum; 4, the lateral, or side cartilage; 5, 5, the alar cartilage; 6, inner portion of the same; 7, sesamoid cartilages; 8, areolar tissue of the ala; 9, aperture of the nostrils. In the next cut, we have represented a section of the nose, showing the internal parts: 1, is the division between the two nostrils, called the septum; the outer, or soft moveable parts, are termed *alæ*, or wings. The nasal cavities are two



irregular spaces, extending from the nostrils, sometimes called the *anterior nares*, to the pharynx (2), where the *posterior nares* are situated. Each of these nares consists of a passage, separated from the mouth by the bony palate (3), and the ascending stages, into which they are arbitrarily divided, are called the *inferior*, *middle*, and *superior meatus*. Opening into these passages are the bony cavities called the *ethmoid* and *sphenoid cells*, the *frontal sinus*, and the *antrum*, all of which, with the whole interior of the nostrils, are lined with mucous membrane, which is soft and moist, like that of the mouth. Over this membrane are distributed the ramifications of the olfactory nerves (4), whose large stems or trunks, several for each nostril, pass upwards through apertures provided for them in the roof of the arched cavity, and terminate in the brain.

We have thus, as it were, a leafless nerve tree, whose roots are in the brain, and whose boughs, branches, and twigs, spread over the lining membrane of the Nostril (5). This nerve is termed the olfactory; when we wish to smell anything,—for example, a

flower,—we close our lips, and draw in our breath, and the air which is thus made to enter the Nose, carries with it the odorous matter, and brings it in contact with the ramifications of the nerve of smell. Every inspiration of air, whether the mouth is closed or not, causes any odorous substance present in that air, to touch the expanded filaments of the nerve. In virtue of this contact or touching of the nerve, and the volatile scent, the mind becomes conscious of odours, though how it does so, we know as little, as how the mind sees or hears; we are quite certain, however, that if the olfactory nerve be destroyed, the sense of smell is lost, and that the nerve is largest in those quadrupeds and birds whose sense of smell is most acute.

Besides this nerve proper of smell, as the olfactory may be called, there is another known to anatomists as “the fifth,” which belongs to the sympathetic system, whose minute branches cover the lower part of the nostrils, and spread inward a considerable distance. It is on this nerve that pungent vapours, such as those of Smelling Salts, Aromatic Vinegar, and the like, make those sharp impressions with which we are all familiar.

Unless the brain and olfactory nerve be in a healthy condition, the sense of smell will be lost or impaired; and any influence which lessens the sensibility of the nervous fibre, thickens the membrane or renders it dry, impairs and lessens this sense; inflammatory action, caused by cold, does this; so does the constant irritation caused by snuff or other pungent substance too frequently applied; this also obstructs the air passages—hence snuff-takers open the mouth when they breathe. Owing to its prominence, the Nose is liable to many injuries; fracture of the bones is not uncommon, and it is likely to be followed by considerable loss of blood; these may be easily known by the mobility of the parts, and it is not generally difficult to rectify the mischief: if a smooth quill be passed up the nostril, or a small piece of wood covered with lint, to act as a support on the inner side, the fractured parts may be restored to their proper shape with the fingers, and a few strips of strapping-plaster will keep them so: they should be kept covered for some days with lint dipped in cold water to prevent inflammation, which so near the brain might be very serious.

Sometimes foreign bodies, such as pieces of tobacco pipe, &c., get pushed up the Nose by children; if it is a bean, or anything which swells by absorption of moisture, the

extraction is a matter of great difficulty. This should not be attempted by other than a professed surgeon; yet if the assistance of such cannot be readily obtained, the effort may be made by means of the flat end of a probe or a silver bodkin, bent in about the eighth of an inch at the end, and the instrument then introduced and passed beyond the object, so as to draw it out as with a hook, when the foreign body has not penetrated far; if the opposite nostril is closed, and the child is made to blow the Nose violently, it may sometimes be driven out.

When the lining membrane of the Nose is inflamed and ulcerated, a solution of Carbonate of Soda in Warm Water thrown up by a syringe will be of service; if the purulent discharge be offensive, a few drops of the solution of Chloride of Soda or Lime should be added to this. For treatment of Polypus of the Nose (see *Polypus*); for partial or total loss of the organ, which is sometimes a consequence of venereal taint (see *Syphilis*). It would be useless here to describe the operation of restoring a Nose lost by decay of the bone and tissues, or through accident, because it is a nice and difficult act of surgical skill, which no non-professional person could attempt; it has been done in several instances with tolerable success.

Of Bleeding at the Nose we have already spoken at page 103, vol. I. On the size and form of this organ as an adjunct to the beauty and expression of the countenance, and as an indication of character, we need not here dwell.

NOSOLOGY (Greek *nosos*, a disease, and *logos*, a description). An arrangement of diseases according to their genera and species; or, in other words, the scientific arrangement of diseases: this has been attempted from the earliest periods of medical inquiry, and various systems have been for a time followed. Sauvages, however, was the first who made what could be really called a scientific arrangement; taking the most prominent symptoms as his guide, he divided them into ten great classes, with the names of which it would be useless to trouble our readers; under the classes were arranged various orders. This method was followed by Linnæus and others with some variations; but their systems were all superseded by that of Dr. Cullen, which was recommended by its simplicity, and which exercised a great influence over modern pathology, or the treatment of disease. It would answer no good end, to enter into an explanation of Cullen's ar-

rangement, nor of that of Dr. Mason Good, and other nosologists; suffice it that they are all more or less artificial, and frequently bring together diseases of a very dissimilar character, and have done some mischief by leading to the impression that diseases have as distinct a character, as the objects of natural history, and can be as easily defined, while, as every medical practitioner knows, that this, except in some few instances, is not the case.

NOSTALGIA (Greek *nostos*, a return, and *algos*, pain). A vehement desire to return to one's own country. See *Home Sickness*.

NOSTRUM (Latin for our own). A term applied to *Quack Medicines* (which see). The preparation of Nostrums of marvellous efficacy, as asserted by their proprietors and vendors, in the cure of all diseases, has been a profitable trade from a very early period of time, and we do not find that, in this so called enlightened nineteenth century, it flourishes less than it did in the dark ages, when travelling mountebanks exhibited their phials of elixir, and boxes of panacea, and amused and astonished gaping crowds, with lying tales of their wondrous virtues. Morrison, Holloway, and Company, still find that it is a thriving and profitable calling to delude the public, and they can do so now with a show of authority, having the sanction of a government stamp, and "the Queen's letters patent." One of the above association of nostrum vendors expends, we are told, £30,000 per annum in advertising; what must we think of the state of public intelligence which enables him to do this and reap, as he no doubt does, or he would not continue the practice, a handsome profit. By analysis, or otherwise, the composition of most of the favorite Nostrums of the day has been discovered: it would occupy too much space to give anything like a complete list of these, so numerous are they, but the following are a few of them:—

Among the most notorious of all the Patent Pills are those which go by the names of *Antibilious*, *Aperient*, and *Liver Pills*. These consist, in almost every instance, of nearly the same ingredients: in fact Aloe is the great basis of them all; and to this is conjoined Gamboge, Jalap, Extract of Colocynth, Soap, and, sometimes, a volatile oil, as Oil of Aniseed, Oil of Peppermint, Oil of Caraway, or Oil of Cloves. They are therefore almost identical in their composition with the common *Aperient Pills*, which are dispensed at the public hospitals, and sold at a cheap rate by every druggist in the kingdom.

To take these in their alphabetical order they will stand thus:—

1. *Ali Ahmed's Antibilious Pill*, which is styled one of the Treasures of the Desert. These pills are highly silvered, to set them off; there are twenty in a box for 1s. 1½d.; and, as usual, they are accompanied with a long list of testimonials. These Pills consist almost entirely of Aloe and Soap; indeed, a pennyworth of Pill-Cochia, as it is termed, will make about two boxes of them.

2. *Anderson's Pills* are composed of Barbadoes Aloe, Jalap, and Oil of Aniseed.

3. *Dr. Baillie's Pills* consist of Extract of Colocynth, Extract of Aloe, Castile Soap, and a little Oil of Cloves.

4. *Barclay's Antibilious Pills* consist of Extract of Colocynth, Jalap, Soap, Resin of Guaiacum, Tartar-Emetic, and Oil of Caraway.

5. *Cockle's Antibilious Pills*, and Family Aperient Pills, consist chiefly of Aloe, Scammony, Jalap, and Gamboge, with a very small quantity of Camomile.

6. *Dixon's Pills* consist, according to Dr. Paris, of Aloe, Scammony, Rhubarb, and Tartar-Emetic.

7. *Dr. Fothergill's Pills*, consist of Aloe, Scammony, Extract of Colocynth, and Tartar-Emetic.

8. *Holloway's Pills*, which are vaunted as a remedy for all diseases, consist of Aloe, and a vegetable matter like Scammony, or Jalap, and Soap.

9. *Hooper's Pills*, of Aloe, Canella, Green Vitriol, Myrrh, and Ivory Black.

10. *Kaye's Worsdell's Vegetable Restorative Pills* are composed of about equal parts of Gamboge and Aloe.

11. *Lee's Antibilious Pills*, of Aloe, Scammony, Gamboge, Jalap, Calomel, Soap, and Syrup of Buckthorn.

12. *Lowden's Bilious and Liver Pills* consist of Aloe and Colocynth.

13. *Morison's Vegetable Pills*.—These are said by the vendor to be particularised for every complaint, and to be suitable to all classes of persons, even to the infant at the breast. The pills marked No. 1, consist of equal parts of Aloe and Cream of Tartar. Those marked No. 2, are composed of Gamboge, Aloe, Colocynth, Cream of Tartar, and a vegetable matter like Horehound.

14. *Parr's Life Pills*, which are sold as the true medicine that enabled Old Parr to reach his great age, consist of Aloe and a vegetable extract like Colocynth.

15. *Peter's Antibilious Pills* are com-

posed of Aloes, Jalap, Gamboge, Scammony and Calomel.

16. *Dr. Scott's Bilious and Liver Pills*, of Aloes, Rhubarb, Jalap, and Peppermint.

A glance at the preceding formulæ will show that the great basis of all these Aperient Pills is a common and cheap cathartic substance, which is usually called Bitter Aloes. To this is conjoined Soap, Scammony, Jalap, Colocynth, and frequently Gamboge. Of all these substances the last is by far the most dangerous; in fact, it is ranked by toxicologists among the acrid poisons. There is no doubt that Gamboge has been selected by quacks as a constituent of Aperient or Antibilious Pills, because of its great activity as a purging agent; and from the circumstance that many, if not most, of the derangements of the system, are occasioned by errors in diet and by irregularities in the action of the bowels, the operation of such a cathartic, provided it is not too energetic, is likely to have a beneficial effect, and so to increase the reputation of the Nostrum.

A second class of pills to which we might refer, are those called *Stomachic, Dinner, Digestive, and Tonic Pills*. These are composed of Aloes, with Ginger, Rhubarb, Cayenne, Ipecacuanha, and a Volatile Oil, as of Camomile, Cloves, or Peppermint. The following are the most notorious:—

1. *Bacher's Tonic Pills* consist of an Alkaline Extract of Black Hellebore, with Myrrh, and Powder of Holy Thistle.

2. *Dr. Baillie's Dinner Pills*, of Aloes, Ginger, Ipecacuanha, and Syrup.

3. *Bath Digestive Pills*, of Rhubarb, Ipecacuanha, Cayenne Pepper, Ginger, Gamboge, and Soap.

4. *Moseley's Pills*, of Rhubarb, Ginger, and Syrup.

5. *Norton's Camomile Pills*, which are vaunted as the most certain preserver of health, the purifier of the blood, and the sweetener of the whole system, consist of Aloes, and Extract of Camomile, with a little Oil of Camomile.

6. *Speediman's Pills*, of Rhubarb, Aloes, Myrrh, and Extract of Camomile, with a little Oil of Camomile.

7. *Starkey's and Matthew's Pills*, of Black Hellebore, Liquorice, Turmeric, Opium, Castile Soap, and Syrup of Saffron.

8. *Lady Webster, Lady Hesketh, and Lady Crespigny's Dinner Pills*, are composed of Aloes, Mastic, Red Rose Leaves, and Syrup of Wormwood.

9. *Page Woodeock's Wind Pills*, of Aloes, Ginger, Cloves, and Peppermint.

A third class of Quack Pills is the *Renal*

and *Gravel Pills*. These consist of Soap and Carbonate of Soda. Two of these are notorious at the present time, viz.:—*Beddoe's Pills for Gravel*, and *Dr. De Roos' Compound Renal Pills*. Both of them owe what little activity they possess to the Alkali of the Soap and Soda.

The Patent Cough Pills are chiefly composed of Ipecacuanha, with Gum Ammoniacum, and Gum Benzoin. *Ali Ahmed's* contains the former, and *Lowden's* the latter.

Dr. Wardleworth's Pills for the Cure of Piles, consist of $3\frac{1}{2}$ grains of Pitch.

Lastly, there are Pills, which have been advertised very extensively of late, in the form of an appeal to nervous sufferers from a retired clergyman, who undertakes to send the recipe for making the Pills on his receiving a postage-stamp. The recipe or prescription, is as follows: Alcoholic Extract of Ignatius Amara, thirty grains; powdered Gum Arabic, ten grains—make into forty Pills. This is usually accompanied with a sincere and earnest hope that, under Divine Providence, it will be found to produce the desired effect. It commonly happens that no one can make up the Pills but the dispenser to the retired clergyman (the Rev. E. Douglass), and hence the necessity for another communication, together with 2s. 6d. in postage stamps, for a supply of the Pills. These Pills have been examined on several occasions, and found to contain no particle of the active principle of the Ignatia Amara—indeed, 20 grains of the Pills yielded to Alcohol only 3-tenths of a grain of a sweetish matter, which may be regarded as Sugar; there has been no trace of Strychnia or Brucia present in it. The real constituents of 20 grains of the Pills are—Gum 8 grains, Starch 11, with about 1 grain of a greenish matter, which is wholly inert. It is fortunate, perhaps, that the Reverend Edward Douglass is cautious enough to send such an inert preparation; for if the Pills containing the real Ignatia Amara were taken with any degree of indiscretion, it is very probable that death would be the result.

NOXIOUS GASES. Of these Carbonic Acid, Nitrogen or Azote, and Hydrogen, are the forms which most frequently come in contact with the human lungs, and cause suffocation: the first of these is produced by the act of fermentation in breweries, slaking lime, or burning charcoal; it also constitutes what is called foul air at the bottom of wells, and in the recesses of cellars and caves long unopened, as well as the "choke damp" of mines, by which so much mis-

chief is frequently caused. Before descending into such places a lighted candle should always be lowered to test the purity of the air; it will be immediately extinguished if there is an excess of *Carbonic Acid* (which see).

Noxious Gases, or vapours, of various kinds, are constantly arising from ill ventilated drains, cesspools, and other places, where decaying animal or vegetable matters are allowed to collect and remain: they constitute the miasma which arises from marshes and other moist lands; and, to inhale them is at all times prejudicial to health. See *Air, Atmosphere, Ventilation*.

NUMBNESS. Insensibility of touch or general feeling: this is symptomatic of several diseased, or injured states of the body or its members; with a weak and defective circulation there is often partial Numbness of the extremities, and in many of them it might be produced by the application of pressure. Excessive cold causes it, and so does gangrene or mortification, paralysis, and sometimes spinal complaints. Friction is the best thing to restore a numbed part to vivacity; the application of heat in such a case will often prove mischievous, and especially when it arises from *Cold* or *Frost* (which see).

NUMMULARY. (Latin *nummus*, money). A term applied to the sputa in phthisis, when they flatten at the bottom of the vessel like pieces of money.

NURSE, NURSING. As in a book like the present this is a subject of very considerable importance, we shall devote some little space to it, although we have elsewhere under several heads, already incidentally alluded to it. The duties and responsibilities of Wet Nursing, we have already said enough of under the head of *Infants*; let us therefore now direct our attention especially to *Nurses for the Sick*, and *Nursery Maids* for children. With such of the former as perfectly understand their business, and are conscientious in the performance of the duties which they undertake, it is a very difficult matter to meet; and we shall hardly overrate the importance of obtaining such, when we consider how much the success of the best directed medical treatment depends upon its being faithfully carried out, and aided by good and judicious Nursing. As a general rule, we should say that a Nurse for the sick should not be younger than 30, nor older than 50; her health and temper should both be good, and if she have children, they should be of sufficient age to require no great

amount of personal care and superintendence: if her mind is much distracted, and her time occupied with home duties and anxieties, she is not likely to devote either the one or the other to her patients as she ought to. A single woman who is content to remain so, and has strong benevolent instincts, is to be preferred for the office; or a widow who has known and felt what trouble and suffering is, having passed through chastening trials and afflictions, is perhaps better still. She should be cheerful in her mind, and gentle in her manners, anyone who has been upon a sick bed, or has closely watched the psychology of disease, knows what a good effect cheerfulness and gentleness have upon patients, whose bodily pains require alleviation. Never choose a loud-speaking, dictatorial woman for a nurse; never a prodigiously busy, bustling, and talkative one; the woman who cannot do without an occasional glass of gin because she "has the rheumatiz," and who likes things hot and strong, will never manage matters satisfactorily in the sick room; nor will the fat and lazy one, who always falls asleep as soon as she sits down, and has an insuperable objection to getting out of bed in the night. Always distrust and shun one who professes an intense affection for the patient, talks about the sacrifices made for his or her comfort, and of the great satisfaction she has given wherever she has been "a-nussing" before; who flatters and fawns and curries favour by the most abject means; such a woman as that is not to be trusted about the bed of a suffering friend or relative; and, indeed, one is puzzled to know who is the model of a perfect Nurse; we have seen, but very seldom a person, whose services were to be obtained for money, who at all approached near to it. A motherly, warm-hearted, gentle, Christian woman, will do more good in the sick room than all the doctors in the world; the true "Sister of Charity" of the Nightingale stamp, is what is wanted; but failing, as we commonly do fail, in obtaining such, we must take the best we can get; and, overlooking many faults and shortcomings, do all that we can for our beloved patients ourselves, and be thankful if we get a nurse at all in times of sickness and emergency. We should remember that the women who generally go out Nursing are not trained in the best of schools for the work which they have to do; that they must often have tempers soured by domestic afflictions, such as poverty, want, the brutality of a drunken husband, the undutiful treatment of ill-instructed children

or else they are those with crushed hopes and blighted affections, whose mature life has not realized the bright anticipations of childhood, and who take to Nursing as a means of subsistence. After all there is no Nurse like the affectionate friend or relative; one touch of the loved one's hand, one tone of her voice, one pitying glance of her eye, how it soothes the irritable mind, and makes the anguish of the body endurable. Not always, however, can the loving and sympathizing attendant at the sick bed be had, and then the services of a hired Nurse are indispensable. To the qualifications already hinted at, we may add that she should be a woman of some education, at least to the extent of being able to read the written directions on the medicine bottles, or, otherwise serious mistakes may occur; she should be a light sleeper, awaking at the slightest call or movement, and have a light step so as to move noiselessly about the room, and a light soft hand. She should be strong, and of moderate stature, that she may have some command over her position in the lifting that is oftentimes necessary. All these are desirable, many of them necessary qualifications, and the more of them our Nurse possesses the better; although we can scarcely expect to have them all combined in one person. And then, on the other hand, we must not expect too much from the Nurse, her duties are commonly extremely arduous; she has broken rest, confinement, and other depressing influences to contend with; this should be borne in mind, and some charity exercised in judging of her errors of omission or commission, so that they be not too glaring or frequently repeated to endanger the safety of the patient. Let her at all times be treated with kindness and consideration; her charge, rightly considered, is a holy one, involving the issues of life and death; and if she is really anything like what a nurse ought to be, she is a woman of a thousand, and ought to be valued as such.

Under the head of *Sickness*, we shall lay down some clear and simple rules for the management of sick rooms, and their inhabitants; we therefore need scarcely here dwell upon the duties of the Nurse, which, of course, vary greatly according to circumstances.

Nursery Maids are, unfortunately, as a rule, by no means a very trustworthy class of persons, and yet, both physically and morally, how much the present and future welfare of our children depends upon them. It is most difficult, nay, almost impossible, to meet in one person with that rare combination of qualities which would constitute

a good Nursery Maid. She should have sprightliness and liveliness enough to amuse the children, with sufficient gravity and discretion to keep both herself and them within the bounds of prudence; she should have good nature, combined with firmness; good sense, and sufficient education to enable her to detect and repress erroneous ideas and principles in the minds of her little charge: scrupulously clean should she be, and true and honest; she cannot attempt deception, or concealment of anything from her mistress, without making the child deceptive too; her thoughts, like her language, must be pure, or she will inevitably poison the springs of infant innocence; she should be orderly and methodical in her habits; no gossip; no believer in old fables and ridiculous stories of ghosts and the like. Some children are ready to go into fits if left in the dark, because they have been told foolish stories about "bogies," witches, and the like. We see Nursery Maids now-a-days walking about in hoops, and dressed more finely than their mistresses; and half the young women, who might be honest and useful members of society—real helps and blessings to mothers of families, come to ruin through love of finery;—this is the great curse of the age, especially disastrous in its effects upon that class to which we look for a supply of our domestic servants. The Nursery Maid should not be smitten with this fatal mania; if a fine and tawdry dresser, she will seldom be neat and tidy in her under garments; she will spend more than she can afford in outward adornments, and be tempted to eke out her means by dishonesty; besides which, her thoughts will be too much taken up by the one absorbing subject, to allow of the child, or children, under her charge, receiving a proper amount of attention. But what has all this to do with the subject of physical health, we may be asked? To which query we reply, that mind and matter are so intimately connected in our organization, that a proper care and training of the one is essential to the well being of the other.

The treatment of children in the Nursery should never be left altogether to servants; a mother's superintendence is always required; and if circumstances preclude the possibility of this, some near relative or staid elderly person, who has herself known and felt the cares and responsibilities of maternity, should superintend the arrangements. Some mothers there are who voluntarily abandon this sacred charge, and entrust their children to menials. The remarks which we have made under the

head of *Infants* will apply equally well here, and serve to make our opinions on this subject known.

With regard to *Nurseries*, we may just observe here that the aspect of such is of the greatest importance, as the health of the inmates depends much on this; there should be plenty of light and pure air (see *Ventilation*); an eastern aspect is too keen, and a northern or south-western one is greatly to be preferred. The Nursery should be at or near the top of the house, and the children's bed room on a level with it; the windows should be opened at all convenient seasons, and may be left so during the summer nights, provided there are no sleepers in it, which there never should be if it is avoidable. A crowded Nursery will always endanger the health of the children, especially if it be not thoroughly ventilated (see *Air*). A very young infant should not be taken into a Nursery where there are well-grown children, as these will, it is likely, be rude and noisy, so as to greatly disturb it, and they too will be annoyed and their pleasures interfered with by its crying.

NUTMEGS. The fruit of the *Myristica Moschata*, which somewhat resembles a pear-tree, and is a native of the islands of



the Indian Archipelago, but more especially of the Moluccas.

This well-known spice owes its stimulant and stomachic properties to the presence of

a volatile oil; it is sometimes used medicinally, but is seldom administered alone, being more frequently employed to disguise the flavour of more nauseous medicines. The fat, or as it is called Butter of Nutmeg, is sometimes an ingredient in ointments and plaisters. The dose of powdered Nutmeg or Mace, which possesses the same properties, is from 10 to 30 grains; of the Oil, from 1 to 3 drops; of the Spirit (*Spiritus Myristici*), 1 to 4 drachms; it also enters into the composition of the Compound Aromatic Powder, dose 10 to 30 grains. See *Mace*.

NUTRITION. This is defined by a good authority to be "the last step in the general process of assimilation, by which living bodies convert the materials which they derive from their food into substances like their own, and appropriate the materials thus changed to their own increase or repairs. The several nutritive matters received into the living body are variously altered by digestion, absorption, respiration, and by all the other changes which the blood or other fluid undergoes in its passage to the several parts of the frame. These changes constitute the process of assimilation, at the end of which each part of the body abstracts from the general and homogenous mass of nutritive fluid that which is required for its own growth or repair; muscle abstracting particles to form muscle; nerves from the same fluid abstracting particles to form nerve and so on." This is the whole theory of Nutrition stated in brief, by which it may be understood that the body, with all its varieties of materials, and through all its changes of form, is developed by Nutrition derived from the food taken into the stomach. If the whole body (as in dwarfs), or any part of it, as the lip in hare-lip, or the palate in cleft palate, come short of its full development, we at once say it is the result of some defects in the nutritive process.

In animals, the material of Nutrition is obtained from the arterial blood, which is constantly sent into the vessels distributed amongst or near the elementary structures of this tissue, but the proper act of Nutrition is performed, not by the power of the blood-vessels as has been commonly supposed, but by the cells and the structures analogous to them, which convert the common nutritive matter drawn from the blood into their own proper tissue. See *Aliment*, *Digestion*, *Food*.

NUTS. This kind of fruit, in all its varieties, must be pronounced decidedly unwholesome. Some persons, but very few, may eat Nuts with impunity; when new they are generally solid and full of oil, so as

to defy any but the strongest digestion; nevertheless, they are much relished and eaten, and especially by children, to whom they should be given not at all, or very sparingly. Chestnuts, when roasted or boiled, are not open to this objection. See *Almonds, Filberts, Hazel, &c.*

NUX VOMICA. The *Strychnos Nux Vomica*, is a native plant of the East Indies, where it is commonly called the Poison Tree: it belongs to the natural order *Loganiaceæ*, and produces the large round flattened seeds of a brown colour, which have long been sold in the shops as a poison for



rats and mice. In India and Arabia it has been used as a medicinal plant from time immemorial, and more recently in Europe as an antidote to the plague, and as a remedy in intermittents, dyspepsia, dysentery, diarrhoea proceeding from debility, worms, hysteria, rheumatism, and hydrophobia: when taken in large doses it produces fearful consequences. The symptoms of poisoning by this substance are, first, agitation and trembling; these are succeeded by stiffness and twitching of the limbs, which gradually becomes more violent until a fit of spasm succeeds, in which the head is bent back,

the spine stiffened, the legs extended and rigid, and the respiration checked for a time: then follows an interval of comparative ease and composure, during which the senses are entire and unusually acute; but this is soon broken by another spasm more violent than the last, and so on until the patient dies of suffocation, produced by the spasmodic constriction of the muscles of the chest. The poisonous effect of this drug appears to be owing to its exciting action upon the spinal system of nerves. The stomach-pump, with repeated doses of Tartar Emetic, and cold effusions should be resorted to in such a case; to be followed by Brandy or some other stimulus; but there is no known antidote for the poison, and death is generally the result of taking it. Tobacco has been recommended, and said to have proved efficacious in some cases; but we cannot speak of this with any certainty. On analysis, *Nux Vomica* is found to contain two alkaline principles—*Strichnia* or *Strichnine*, and *Bruchia* or *Bruchine*; (both of which see); they are united with a peculiar acid called *Ignasuric* or *Strichnic Acid*. The pharmaceutical preparations of *Nux Vomica* are the Extract, dose $\frac{1}{2}$ a grain to 3 grains, and the Tincture 5 to 10 minims. Since the introduction of *Strichnine*, however, these have been but little used, and no preparation of this most powerful drug should be, except under the most careful medical superintendence.

The bark of the *Nux Vomica*, called False Angustura Bark, is sometimes used as a tonic and febrifuge; and the root, which is very bitter, is used by the natives of India to cure intermittent fevers and the bites of venomous reptiles; the fruit in which the seeds are enclosed is soft and pulpy; it is, when ripe, of a beautiful orange colour, and is greedily eaten by birds; the seeds are used in the preparation of spirits, to render them more intoxicating; they may have been occasionally employed for this purpose by unscrupulous brewers, but not, as we imagine, to any great extent.

OAK. This, the noblest and most historical of England's trees is the *Quercus Pedunculata* of botanists, belonging to the natural order, *Amentaceæ*. The Bark, which contains tannic acid, and is therefore astringent in its properties, is used both externally and internally in hæmorrhages, fluxes, and all cases which require astringents. The dose of the Powder is from half a drachm to a drachm; it has been given with some success in intermittent fevers, but the Decoction is the more general form of administration; it is made by boiling 10

drachms of the bruised Bark in 2 pints of Water, until it is reduced to 1 pint; the dose is from $1\frac{1}{2}$ to 2 ounces; it may be used as an injection, gargle, or lotion. There is also an Extract of Oak Bark, the dose of which varies from 10 grains to 2 scruples.



In chronic sore throat, with relaxed uvula, the above Decoction, with about half a drachm of Alum, and 1 oz. of Spirits of Wine to the pint, makes an excellent gargle. Galls are another medical produce of the Oak, although they are not so commonly found in this species as some others: (for the uses and properties of these see *Gall*).

OAT. This well-known plant, the *Avena Sativa* of botanists, belongs to the natural order *Gramineæ*, or grasses, and it performs an important part in the economy of creation, being considered by some the most nutritious of all the grains used as food; as an article of diet, however, it generally ranks next after wheat, the latter being superior to it in consequence of containing a larger amount of gluten. Formerly, the whole population of the north of England, Wales, and Scotland subsisted wholly, or chiefly, on this grain; and at present it is the kind most largely consumed in many parts of the latter country; although, in others, it is gradually giving place to wheat; the notion that it is fit food only for the inferior animals, having of late years gained much ground in the public mind, although it is a very erroneous one; the Scottish Highlanders, and the Lowland peasantry, who have lived almost entirely on Oatmeal, proving this sufficiently, alike by their well-knit, muscular, and bony frames, and their

clear and vigorous intellects. According to the analysis of Professor Norton, of America, the grain of Oats contains 65.11 per cent. of starch; 2.24 of sugar; 2.23 of gum; 6.55 of oil; 16.51 of a nitrogenous body, analogous to casein, though differing from it in some respects; 1.42 of albumen: 1.68 of gluten; 2.17 of epidermis; and 2.09 of alkaline salts, with allowance for loss and error.

Of Oatmeal, the Scotch is by far the best, to prepare it the grain is first kiln-dried, stripped of its outer skin or husk, and then coarsely ground. Made into "porridge," it constitutes, perhaps, the best breakfast diet for children known; it should be prepared thus:—Put into a saucepan as much water as will make the quantity desired, say a pint, let it boil, then take a handful of the meal, in the left hand, and while letting it fall gradually and gently into the water, stir the mixture quickly round with a wooden spoon, held in the right hand; continue doing this, until the mixture assumes the consistency of thick gruel; then add a little salt, and let it boil gently for ten minutes, keeping it stirred all the time; add a little more water, and again boil for other five minutes, still stirring; it will then be quite smooth and digestible, to make it which is the object of the lengthened boiling: o make it more nourishing and pleasant, some milk may be added, and, if preferred, a little sugar; this hides the slight bitter taste of the meal, which is objectionable to many. Scottish children never tire of porridge, but take it morning and night regularly until they grow up, and often afterwards. It would be well if this practice were more followed south of the Tweed, than it is.

The kernels or grain of the Oat, when deprived of their husks, are called Groats; they were formerly much used in the thickening of soups and broths, but are now generally superseded by pearl-barley, and their chief use at present is for gruels and decoctions for demulcent purposes.

In the process of shelling there is obtained from the grains of Oat a kind of thin pellicle or minor scale, which has the technical name of "seeds," and from which is prepared a peculiar jelly-like food, very good and nourishing for invalids; it is called in Scotland *Sowens*. Either the groats or oatmeal may be employed in the preparation of *Gruel* (which see).

A very nutritious *Oatmeal Pudding* may be made in the following manner:—Over a pint of the best fine Oatmeal pour a pint of boiling milk; do this in the evening, and let it stand all night; next morning beat

up one egg with a little salt, and stir it well in; then butter a basin sufficiently large to hold the whole, cover it tightly with a floured cloth, and boil it in a large saucepan about an hour and a half. Eat it either cold or hot with a little butter, not melted, and, if agreeable, salt; when cold it can be cut into slices, and toasted like bread. Oat Cakes, which in Scotland are made thus:— Make a paste of oatmeal and water, seasoned with salt, of such a consistency that it can be rolled out as thin as a slate; cut it to any required size; mark the top crosswise, and bake on a girdle or stone-slab over the fire, before which the cake should afterwards be placed, to brown at the top.

Oatmeal Poultices are more stimulating, and draw more rapidly than those made of linseed meal, and are therefore sometimes employed in preference; but the mass which this meal forms is not so firm and tenacious (see *Poultices*).

Concretions in the bowels are sometimes caused by a too exclusive use of Oatmeal as food, especially when it is coarsely powdered and eaten in a dry state. One of the most beneficial effects of this meal is the result of its aperient property; with some persons its action in this way is too strong, and in this case it must be discontinued; with others it gives rise to heartburn and sickness, a plain proof that it is not suited to their particular systems: very commonly a constant employment of it as a breakfast diet will correct a tendency to constipation. Its quality, and consequently its properties, at all times depend very much upon the soil in which it is grown; and that of Scotland appears to produce it in the greatest perfection. Much of that sold in this country is adulterated with barley-meal, which is not nearly so nutritious an article of diet.

OBESITY (Latin *obesitas*, corpulency). An excessive development of fat in the body; in scientific language *Polysarchia* (which see), also *Fat*.

Obesity is of two kinds; one general, extending over the whole body and limbs, which may be considered as a kind of dropsy of the animal oil; and the other confined to certain organs, in which case it is called *splanchnic*. The omentum is commonly the part overloaded with fat, which produces that rotundity of the abdomen, usually known as pot-belly.

OBLIQUUS. The name given to certain muscles, on account of their oblique position; thus we have *O. externus*, and *internus*—the first, a muscle of the abdomen, arising from the eight lowest ribs, and inserted into

the linea alba and the pubes; it is sometimes called *descendens*; the second is a muscle situated within the first, and termed *ascendens*, or *O. minor*: these two muscles effect the turning of the trunk upon its axis, and other motions. *O. inferior* and *superior*, are two muscles of the eye; the first being the shortest and the last the longest pertaining to that organ; hence they are sometimes called *brevissimus* and *longissimus oculi*; they produce the rolling motion of the eyeball, and hence have been named *circumagentes*, and also, from the expression they impart, *amatorii*. There are also two muscles which incline the head backward, and to one or other side, to which the names *O. inferior* and *superior* have been applied.

OBLITERATION (Latin *oblitero*, to efface). A surgical term, implying the closure of a canal or cavity of the body, by adhesion of its parietes or edges. See *Wound*.

OBLIVION (Latin *obliviscor*, to forget). Failure of memory, forgetfulness; sometimes called *Amnesia* or *Amnestia*.

OBSTETRIC (Latin *obstetrix*, a midwife). Belonging to midwifery, or, as it is sometimes called, *Obstetrics*. See *Labour*.

OBSTIPATION (Latin *obstipo*, to stop up). A form of costiveness, in which the fæces, when discharged, are hard and slender, or in little balls and fragments. See *Constipation*.

OBSTIPUS (Latin *ob*, to, and *stipis*, a stake). Stiff, awry; hence the term *Caput obstipum*, wry-neck, or *Torticollis* (which see).

OBSTRUENTS (Latin *obstruo*, to shut up). Medicines which close the orifices of vessels.

OBTUNDENTS (Latin *obtundo*, to make blunt). Substances which sheathe or blunt irritation, like demulcents; they generally consist of bland, oily, mucilaginous matters, which form a covering to inflamed or irritated surfaces. See *Demulcents*.

OBTURATOR (Latin *obturo*, to stop up). The name of two muscles of the thigh, distinguished by anatomists as *O. externus*, and *O. internus*: by means of these the thigh moves backwards and forwards, and rotates upon its axis; the first is sometimes called *rotator femoris extrorsum*; the latter is alluded to in old surgical works, as the *bursalis* or *marsupialis*. See *Thigh*.

OCCIPUT (Latin *ob*, and *caput* the head). The back part of the head, of which the front is called the *Sinciput*. From this root, we have the term *Occipito-frontalis*, applied to a muscle which arises from the transverse ridge of the *occipital bone*, passes over the upper part of the cranium, and is inserted into the skin under the eyebrows;

this is the muscle which raises the eyebrows and wrinkles the forehead.

OCCUSIO (Latin *occludo*, to close up) closure; hence the terms *O. pupillæ lymphatica*, closure of the pupil by an adventitious membrane; and *O. pupillæ cum synechia posteriori*, closure of the pupil with adhesion of its margin to an opaque capsule, the lens being at the same time generally opaque; it is usually a consequence of *iritis*. See *Ey*.

OCCULT (Latin *occultus*, hidden). As applied, 1st, to diseases, the causes and treatment of which are not understood; and 2nd, to qualities of bodies which do not admit of rational explanation.

OCCUPATION (Latin *occupatio*). A person's calling or business, which will often have a peculiar effect in modifying the state of health, and inducing particular diseases; it will also at times considerably modify the action of medicines administered; it is, therefore, of great consequence that any one consulting a medical man should state every particular as to his or her mode of life and Occupations. Considerable enquiry has of late been made into the rate of mortality, which obtains in the several mechanical and other employments, by which people earn a livelihood; and laws have been made, and improvements have been effected in the means of carrying on the various industrial operations, with a view of guarding against the injurious effects of some of them. As a simple and striking example of the latter, we may mention the magnetic wire screen now worn over the mouths of the needle grinders, by which the fine particles of steel dust are attracted, and prevented from entering the throat; by this means the lives of these operatives have been greatly prolonged: other instances might be mentioned of beneficial results from efforts made in this direction; but we can here only speak in general terms; and first on Occupations which necessitate a constrained position; these have their characteristic organic diseases, which tend to shorten life; thus, the tailor, and the shoemaker often suffer, the former with paralysis of the lower limbs, the latter with affections of the heart, lungs, and stomach, from bending to the last and lap-stone, and both, in common with all sedentary persons, have commonly constipated bowels. The housemaid, too, gets white swelling in her knee, from its frequent contact with the stone step or floor, and the thatcher has the same result produced by pressure against the ladder; chimney sweeps have cancer of the scrotum; cooks are very subject to piles; and cabmen and coach drivers

to pulmonary complaints, rheumatism, and affections of the eyes from constant exposure to cold and wet, while they are precluded from active exercise. Then there are grocer's itch and baker's itch, and the lead cholic which affects painters and plumbers. Those who are exposed to noxious vapours as in chemical works and factories, or who breathe the malaria of marshy and fenny places, or of ill-drained or ill-ventilated houses, have their lives cut short by one disease or another, which might in most cases be found to have originated in the circumstances attendant on their particular trade or calling. We find that those who reside and labour in towns have not the strength and stamina of those engaged in agricultural pursuits; among the first prevail scrofulous affections, pulmonary complaints, typhoid fevers, and other diseases which are characteristic of want of tone and vital energy; those in the country who breathe plenty of fresh air, so as to get their blood well oxygenized, and are strong and active, are more liable to inflammatory disorders. It has been calculated that of our town population, $3\frac{1}{2}$ per cent. die annually, but of our country population only $1\frac{1}{2}$ per cent., while the average state of health stands in the proportion of about 7 to 3.

An idle and well-to-do person does not, as a rule, enjoy such good health as the agricultural labourer, when he is properly fed, and not overworked; but this, alas, is not very commonly the case. Inflammatory diseases are likely to attack those who lead luxurious lives, and whose Occupation it is to take their pleasure only. Those who overtask their intellect will be pretty sure to suffer for it in the end (especially if, as is commonly the case, they are too sedentary in their habits); they will be likely to have constipation, nervous debility, softening of the brain, leading to apoplexy.

After all, most of the bodily diseases from which men suffer might, in a great measure, be mitigated, if not altogether avoided, whatever may be their Occupation, by a little care, and attention to the laws of health; but we commonly see people so utterly reckless of these, and of the many dangers by which they are surrounded, that one only wonders, not that the deaths which seem to be the result of causes arising out of Occupations being many, but that they are so few. The miner will often be without his Davy lamp, and the needle-grinder his magnetic respirator, however well they may know what fatal results will follow, sooner or later from such neglect.

OCTANA (Latin *octo*, eight). An erratic

intermittent fever which returns every eighth day. See *Fevers*.

OCULUS (Latin for the **Eye**). Hence come the terms *Ocular spectres*, *Phantasmata*, or imaginary objects floating before the eyes; they assume various forms, such as *Musæ volitantes*, Motes or small floating bodies, a common precursor of amaurosis: *Net-work*, the *Suffusio reticularis*, of Sauvages, the *Visus reticularis* of Plenck: *Sparks*, this is the *Suffusio seintellans* of Sauvages, it generally proceeds from a blow or excess of light: *Dazzling*, this was called by the old Greek writers *Marmarige*; it is supposed to arise from plethora of the small vessels: *Irridiscient appearance*, exhibiting the colours of the rainbow; this was called by Sauvages *Suffusio coloris*.

From the same root *Oculus* comes, also the term *Oculist*, one who practices in diseases of the *Eye* (which see).

ODAXISMUS (Greek *odaxeo*, to bite). Pain or irritation of the gums. See *Teething*.

ODONS (Greek for a tooth). Hence the terms, *Odontagra*, gout in the teeth; *Odontalgia*, pain in the teeth, or tooth-ache, remedies for which are called *Odontalgies*, *Odontiasis*, dentition, or the cutting of the teeth; *Odontoides*, tooth-like, the name of a process of the dentata, or second vertebra. See *Spine*, and *Teeth*.

ODOUR. The peculiar effect of certain odours upon the sensitive nerves of many persons is very remarkable. We meet with some to whom that which is agreeable and refreshing to most, causes such a sense of sickness and disgust that they are, as the poet says, almost ready

"To die of a rose in aromatic pain."

Others again there are who can tolerate, and even seem to enjoy, the most offensive odours. We cannot account for this, but must let it pass as a curious psychological fact. On the subject of odours we have already made some remarks in our article on the nose, and we shall have more to say on it when we come to speak of the sense of *Smell*, and of *Perfumes*. It will, therefore, be sufficient for us now to observe, that the odour of the body in sickness will frequently indicate pretty clearly the nature of the disease: thus consumption, acute rheumatism, and suckling, have each their characteristic odours; and in certain diseases the body emits a smell like that of damp earth. A foetid breath may be caused by decayed teeth, or a morbid state of the stomach and bowels: we may sometimes observe this in healthy persons, who, for want of teeth, or from some other defect,

have not the power of reducing their food to a fit state for easy digestion.

ŒDEMA (Creek *œdeo*, to swell). This term literally means a swelling of any kind, but it is now confined to one of a dropsical nature, situated in the cellular tissue. The affection, when extensive, and accompanied with general dropsical symptoms, is termed *Anasarca*. Œdema may be the result of liver or kidney disease, and in this case the remedies must be directed to act beneficially on those organs; but when, as is often the case, it takes place in anæmia and chlorosis, and is clearly owing to want of tone in the system, tonics and other means of imparting strength must be resorted to. See *Dropsy*.

ŒMOS (Greek for the shoulder-blade). Hence the terms *Œmo-hyoideus*, applied to a muscle, which arises from the shoulder, and is inserted into the *os-hyoideus*; this muscle it is which depresses the lower jaw. *Œmoplata* is a name by which the scapula or shoulder-blade is sometimes called.

ŒNANTHE CROCATA. The scientific name for the Hemlock, or Water Dropwort, belonging to the natural order *Umbelliferae*: this is considered by some the most deadly of all our native vegetable poisons; it is said to



be equally fatal to man and the inferior animals, and many deaths are recorded to have taken place from eating the roots by

Mistake for those of the Water Parsnip: they are not disagreeable in taste, to deter persons from doing this. The saffron-coloured, milky juice which the whole plant discharges, wherever bruised or broken, and especially at the root, is a sure indication of its poisonous nature; every plant which has this peculiarity should be avoided. In some localities where it is found, especially in Pembrokeshire, the plant is known by the popular name, "five-fingered root;" it is said to be useful in cutaneous diseases; applied to the skin it produces redness and irritation. The symptoms of poisoning by it are inflammation of the stomach, with great cerebral disturbances, indicated by giddiness, convulsions, and coma. The treatment will be the same as that of other irritant vegetable poisons. The common Water Dropwort (*Æ. Fistulosa*) is less poisonous than the above; it has a hot|nauseous taste, an unpleasant smell, and is therefore more likely to be regarded with suspicion.

ŒSOPHAGUS (Greek *oiso*, to carry, and *phago*, to eat). The carrier of food, or the passage by which food is conveyed from the mouth to the stomach. From the same root we have *Œsophagotomy*, the operation of cutting into this part for the purpose of extracting any substance which has lodged there, and cannot be otherwise removed. See *Alimentary Canal, Neck, Gullet*.

ŒSTRUS. The scientific name of the Breeze or Gad Flies; the larvæ of which, called Bots, are said to have been found convoluted in the fœces and mucus of man; that they find their way into the intestines of horses, and other animals, there can be no doubt, as they have been found there in great numbers: the eggs of the insect are



laid in holes punctured by the fly in the skin of the animal, are there hatched, and the irritation which they create causes the tongue to be applied to the part, and thus they are conveyed into the stomach. We give a cut of the male and female of this formidable fly, the latter being furnished with the piercing instrument called the *ovipositor*.

OFFICINAL (Latin *officina*, a shop). A term applied to any medicine directed by the Colleges to be kept in the shops. All the formula of the Pharmacopœias are termed officinal preparations, and are frequently so mentioned in this work.

OIL (Latin *oleum*, from *olea* the olive). The designation of a great many unctuous liquors, which are either of animal or vegetable origin; they are considerably lighter than water, or any watery fluid, and impart a greasy stain to paper: they are divided into *fixed Oils*, which also include the fats; and *volatile Oils*; and again, in accordance with their power of solidification, by absorption of oxygen from the air, into *drying* and *non-drying Oils*. Another very simple and natural division sometimes adopted is into *animal* and *vegetable Oils*; the latter being obtained by expression from the seeds chiefly of various plants: it is termed "cold-drawn," when no heat is used in the process. "Oils," is a common name applied to any greasy liniment, or embrocation, for sprains and bruises, and among other curious ingredients which country people are accustomed to ask for, such as Oil of Viper, &c., is Oil of Brick. This name may be derived from the practice which formerly obtained, of steeping a hot brick in Oil, and then subjecting it to distillation; this produced an acrid and empyreumatic fluid, which was called Philosopher's Oil. The principal fixed vegetable Oils used medicinally, are the Linseed, Poppy, Castor, Croton, Almond, and Olive Oils. The volatile kinds are very numerous; they are so called from their evaporating, or flying off, when exposed to the air; they are also called *essential Oils*, because they constitute the chief ingredient or *essence* of the vegetable from which they

are extracted; upon the presence of these depends the odoriferous properties of all plants; some of them, such as those of Turpentine, Lemon, Juniper, are composed simply of carbon and hydrogen; others, such as Lavender, Peppermint, &c., also contain oxygen. Camphor, which is a concrete Oil, belongs to this division; in others, such as those of Garlic and Mustard, we find a portion of sulphur. Volatile Oils are valued chiefly, for their agreeable flavour, and for their stimulant and carminative properties; out of the long list of these, we may select Amber, Aniseed, Bergamot, Cajeput, Camphor, Cassia, Cinnamon, Camomile, Cloves, Copaiba, Cubebs, Dill, Fennel, Juniper, Lavender, Lemon, Marjoram, Mint,

Orange, Peppermint, Pennyroyal, Pimento, Rosemary, Rue, Savine, Sassafras, Turpentine, as the most important: the peculiar properties of all these, as of the others here mentioned, and to be mentioned, are spoken of under their several heads.

All fixed Oils and animal fats are separable into two or three different principles: one of these, called *oleine*, remains fluid at the lowest temperature; a second, *margarine*, has a higher melting point; and a third, *stearine*, a still higher; if we observe olive and some other Oils in cold weather we can see this solidification of one constituent element of the fluid takes place sooner than another. Fixed Oils have also the peculiar property of forming soap with the caustic alkalies.

Of animal Oils, the Cod Liver and Spermaceti, with those of a more solid nature, such as Lard, Suet, &c., are the kinds which are chiefly used medicinally; none of these are Volatile or Essential Oils.

OINTMENT (Latin *unguentum*, from *unguo* to anoint). This is a greasy or unctuous preparation, in which lard or oil is made the vehicle of more active ingredients; it is generally of about the consistence of butter. Ointments should be used tolerably fresh, as if rancid they are irritating, and often counteract the good effect which they are intended to produce. The Antimonial, Gall, Hydriodate of Potash, Mercurial, Nitrate of Silver, and Red Precipitate Simple or Spermaceti, Sulphur, and Zinc Ointments may be selected from the list of these preparations, as those most likely to be useful in domestic treatment.

The Simple Ointment, which is serviceable for many cases of accident or injury, may be thus prepared:—Melt together, in a pot or pipkin, Spermaceti, 4 oz.; White Wax, 2 oz.; Olive Oil, 16 oz.;—then stir continually until it is quite set.

Formerly, Ointments were constantly used in the dressing of wounds and cuts, and all kinds of sore and inflamed surfaces; but of late, the more agreeable and cleanly, and perhaps more efficacious, water dressing has been employed, and with marked success. See *Cerates*.

OLECRANON (Greek *oleos*, the ulna, and *kranos*, the head.) The elbow or head of the ulna. See *Forearm*.

OLEFIANT GAS. (Latin *oleum*, oil, and *fio*, to become.) A name given by the Dutch chemists to a substance resembling oil; it was a compound of one part of carbon and one of hydrogen, and was named by Ure, Carburetted Hydrogen, to distinguish it from the gas resulting from the admix-

ture of one part of carbon with two of hydrogen, which is termed Hiper or Sub-Carburetted Hydrogen, and sometimes Hydroguret of Carbon.

OLEIC ACID. (Latin *oleum*, oil.) An acid prepared from soap made with potash and fluid vegetable oil; it receives the above name from its property of saturating bases, and forming neutral compounds.

OLEUM (Latin *olea*, the olive). Hence we have the terms *O. animale*, animal oil, an empyreumatic oil obtained by distillation from animal substances; this is sometimes called Dippel's oil; *O. ethereum*, Etherial oil, or Oil of Wine, is one of the ingredients of the compound spirit of *Ether*. *O. sulphuratum*, Sulphuretted Oil; formerly called Balsam of Sulphur. *O. vitilas*, oil of Eggs; obtained by boiling the yolks and then submitting them to pressure; fifty eggs yield about five ounces of oil; this is much used in the ointment for killing mercury.

OLEO-RESINÆ. Native compounds of volatile oil and resin; these are the proper juices of plants which constitute the natural orders *Coniferae*, *Amyrideæ*, and some of the *Leguminosæ*, such are the *Turpentine*s (which see).

OLEO-SACCHARUM (Latin *oleum* oil, and *saccharum* sugar). A name given to a mixture of oil and sugar, incorporated to render the oil more easily diffusible through the watery fluid.

OLOPHLYCTIS (*olos* white, and *phlyxo* to be full or hot). A small hot eruption covering the whole body, when partial it is termed *phlyetæna*.

OLFACTORY. (Latin *olfacio*, to smell.) Belonging to the sense of smell, a term generally applied to the first pair of nerves.

OLIBANUM. This is a fragrant gum resin, the produce of several species of plants, but chiefly of the *Boswellia Serrata*, and the *B. Papyrifera*, the first a native of Amboyna and the mountainous parts of India, and the second of Abyssinia and the east coast of Africa; they both belong to the natural order *Amyridaceæ*. It is now thought that the frankincense used in the religious ceremonies of the Jewish and other ancient churches was gum Olibanum, and not the resinous juice of the *Juniperus Lycia*, which goes by the name Gum Thus, or Frankincense. Olibanum has been used in medicine to check excessive secretions from the mucous membranes, such as bronchitis, leucorrhœa, &c., it also enters into the composition of stimulating plaisters; but it is not nearly so much employed now as it used to be.

OLIVARIS. (Latin *olive*). Resembling an

olive; hence the term *corpora olivaria*, applied to two olive-shaped eminences of the *medulla oblongata*. See *Brains*.

OLIVE. The common Olive tree called by botanists *Olea Europæa*, belonging to the natural order *Oleineæ*, is a shrub extensively cultivated in Southern Europe and Syria, for the sake chiefly of its fruit, which is eaten as a table delicacy, and from which



the Olive Oil is extracted by pressure. When fresh and pure this Oil is clear and limpid, of a greenish yellow colour, bland and pleasant to the taste; it is used as a demulcent and emollient, both internally and externally; given in doses of about an ounce, it acts as a mild laxative; it is especially good when there is an irritated state of the intestines, arising from the presence of worms, or from other causes. It is nutritious, and better suited for the inhabitants of warm climates than butter. According to Braconnet, its constituents are *oleine* and *margarine*, in the proportion of 72 parts of the former to 28 of the latter; it is solidified by nitrous acid and nitrate of mercury, and converted into a peculiar fatty substance, which has been called *elaidin*. A gum resin, which in some countries exudes from the bark of the tree, has been found, on analysis, to contain a peculiar principle analagous to gum, which has received the name *olivile*. We are not aware that this has been employed medicinally;

although the bark itself, which possesses an acid and bitter taste, has been used as a substitute for Peruvian bark; and a decoction of the leaves, two ounces put into a quart of water and boiled down to a pint, has been recommended in intermittents, the dose being two ounces three times a day.

Olives are prepared for the table as a pickle, by repeatedly steeping them in water to which quick lime or some other strong alkali is sometimes added to hasten the operation; they are then soaked in pure water, and afterwards boiled in salt and water, with or without an aromatic; they are supposed to create an appetite and to assist digestion, and are commonly taken after a luxurious dinner, when the appetite has become cloyed and surfeited by over-feeding; of course we do not recommend them.

Of Olive or Salad Oil, as it is commonly called, there are various kinds and qualities: from Italy we have the Florence, Lucea, and Gallipoli Oils; the first is the best, and is commonly sold in flasks; mixed with vinegar, it makes the best salad dressing known; some prefer it to butter for frying fish; taken as a demulcent, the common dose is from 1 to 2 drachms; it is usually made into an emulsion with gum and water, and other ingredients, for which purpose it does as well as Almond Oil. See *Oils*.

OMAGRA (Greek *omos*, the shoulder, and *agra*, a seizure). Gout in the shoulder.

OMENTUM (Latin *omen*, an omen). The epiploon or caul, so called because it was formerly examined for the purposes of augury. The omentum consists of folds of the peritonæum connected together by cellular tissue; the different portions are named—1. Hepato-gastrie, or smaller Omentum; 2, the Great Omentum; 3, the Colic Omentum; 4, the Gastro-splenic Omentum. One of the chief causes of the protuberance of the abdomen in very stout persons is occasioned by the overloading with fat the membrane which is spread over the intestines, most likely as a protection against cold, and which is called the Omentum; it is this which often projects in ruptures, creating serious inconvenience, and sometimes fatal consequences. See *Hernia*.

OMPHALOCELE (Greek *omphalos*, umbilicus, and *kele*, a tumour). A rupture at the umbilicus (see *Hernia*). From this root we have also *Omphalotomia*, the separation of the umbilical cord or navel string.

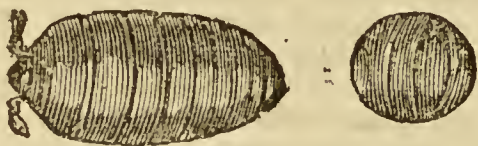
ONANISM. The crime of Onan, or self-pollution. This crime is, by youths coming to the age of puberty, indulged in to a frightful extent; and it is a fruitful source

of impotence, and every kind of bodily and mental weakness. "Some of the most lamentable instances," says Dr. Thompson, "of youthful decrepitude, nervous affections, amaurotic blindness, and mental debility and fatuity in early life, which come before the medical men are traceable to this wretched practice." And he further says, that whenever young people about the age of puberty exhibit unaccountable symptoms of debility, particularly about the lower limbs, with listlessness and love of solitude, look dark under the eyes, &c., the possibility of vicious practices being at the root of the symptoms should not be lost sight of. It is from this and other evil practices of the like nature that the advertising quacks reap their greatest advantage, promising secret and speedy cures for infirmities brought on by means which it is a sin and shame even to think about—infirmities which are often irremediable, and which at no time can be relieved, except by an entire abstinence from the criminal indulgences which caused them, and by a long course of tonic treatment; thus only can an impaired constitution be strengthened and invigorated. In all such cases, a professional man should be consulted; the debility and other bad symptoms brought on by the practices hinted at, cannot be at once relieved, and the treatment must depend very much upon constitutional and other peculiarities.

ONEIRODYNIA (Greek *oneiros*, a dream, and *odyne*, pain). In this term are comprehended nightmare, somnambulism, and all disturbances of the imagination during sleep. See *Dreaming, Nightmare*.

ONION. This familiar plant, the *Allium Cepa* of botanists, is thought to have come originally from Egypt, where it was an object of worship. For the properties and uses of this and other members of the genus *Allium* (see that head).

ONISCUS ASSELUS. A scientific name for



the wood-louse or slater (see *Millipedes*).

ONYX (Greek for the finger nail). A term applied to a small collection of pus in the anterior chamber of the aqueous humour of the *Eye* (which see). It is so named from being shaped like a finger nail; it is of the same nature as *hypopyum*; some call by this name a small abscess formed between the layers of the

cornea. An abscess formed beneath or near to the finger nail is termed *Onychia*; this is an ulcer often very difficult to heal; and as the success of any remedial measures will depend greatly on the general vigour of the system, the treatment must be general, as well as local. Warm poultices will generally relieve the irritation about the nail, and when they have effected this object, Black-wash should be applied to the part; afterwards dress it with simple *Spermaceti Ointment*; or if this does not subdue the inflammation, Cold Water dressing had better be used for a time.

OPACITY (Latin *opacitas* from *opacus*, opaque). A term applied to any thickening of the cornea, or any change which affects its transparency, and which is popularly called film. There are various kinds or degrees of Opacities, such as, 1st *Albugo* or *Leucoma*, the denser form; 2nd *Haziness* or *Nebula*, the slighter form; and 3rd *Macula*, a mere patch, or speck (see *Eye, Sight*).

OPERATION (Latin *opus*, a work). Any exercise of the surgical art, performed by the hand, or by the assistance of instruments; it is termed *simple* when one kind of operation is required, and *complicated*, when it consists of more than one kind, as in cataract, when both incision and extraction is necessary. There are several simple surgical Operations which can be easily performed by a careful nurse or mother, such as the extraction of a thorn or splinter, lancing the gums, cutting of an in-growing toe nail, opening a small abscess or fistula, &c.; and sometimes the tying of a severed artery, cupping, or bleeding, may be necessary to save life. Directions for the performance of all these will be found under their several heads, and for some of them under the head of *Accidents*.

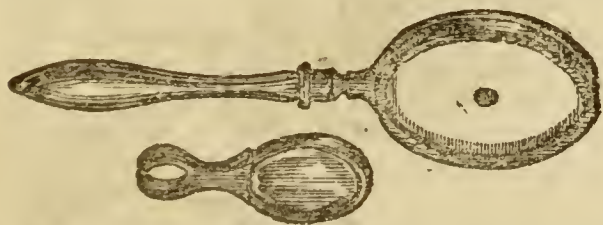
OPHIASIS (Greek *ophis*, a serpent). A term applied by Celsus to a variety of *Orea*, a kind of baldness, which spreads in a serpentine form round both sides of the head, from the occiput: that which spreads in irregular patches is termed *Alopecia*.

OPHTHALMIA (Greek *ophthalmos*, the eye). Inflammation of the eye, properly termed *Ophthalmitis*. Under the head of *Eye* we have already spoken of the several forms of Ophthalmic disease which occur in this country, and given such directions for their treatment as are likely to be of service to the unprofessional reader: we may here go a little more into detail, and state that Ophthalmia has by some surgical writers been divided into seven distinct kinds, viz., 1st, the *Catarrhal*, arising from atmospheric

causes, or peculiarities, and popularly called cold or blight; it is characterized by an increased mucous discharge, as described by the term *Ophthalmia mucous*; it is seated in the conjunctiva. 2nd, the *Purulent*, which is inflammation of the most acute kind, attended with a purulent secretion; it may be divided into the *Purulent Ophthalmia* of infants, and that of a mature age, which is the *Egyptian Ophthalmia*, being that which is endemic in Egypt, and was brought from thence into Europe by the French and English troops: it is undoubtedly contagious. Another form is the *Gonorrhœal Ophthalmia*. (See *Gonorrhœa*). 3rd, the *Rheumatic*, which results from cold, and is chiefly confined to the sclerotica; this may be divided into the *Catarrho-rheumatic*, which is active inflammation, embracing the mucous and fibrous coats of the eye; the *Erysipelatous*, which is a modification of conjunctival inflammation; and *Pustulous*, an inflammation of the mucous membrane, attended with the formation of pustules. 4th, the *Scrofulous* or *Strumous*, an external inflammation of the eye, occurring in scrofulous subjects. 5th, in this division we have three varieties, the *Variolous*, the *Morbillus*, and the *Scarlatinous*, the first occurring in small pox, the second in measles, and the third in scarlatina. 6th, the *External*; and 7th, the *Internal*; the first being inflammation of the outer coats of the eye; and the second, idiopathic inflammation of the internal texture of the eyeballs.

Ophthalmodinia, *Ophthalmoplegia*, and *Ophthalmoptosis*, which signify respectively—the first pain in the eye; the second, paralysis of one or more of the muscles of the eye; and the third, paralysis of the globe of the eye.

OPHTHALMOSCOPE. This is a newly invented instrument, intended to assist the surgeon in his diagnosis of eye disease; it consists of 1st, a flat circular mirror with a small round hole in its centre, and placed at



one extremity of a short handle; and 2nd of a small magnifying glass. In using this instrument, the patient is placed with his back to the light, and with his head slightly thrown backward, while the surgeon standing in front of him throws the light from

the mirror directly on the eye, making his observations on the state of this organ through the perforated centre of the reflecting medium. When necessary, he makes use of the magnifier, holding it against the back of the mirror, so as to intervene between his own eye and the perforation. The light thrown upon the eye by this instrument is, necessarily, much more powerful than any which could be obtained in the ordinary way.

OPISTHOTONOS (Greek *opistheo*, backwards, and *teino*, to bend). Tetanus of the exterior muscles, by which the body is bent rigidly backwards. See *Tetanus*.

OPIUM. This is the partially dried juice of the white or Eastern Poppy—the *Papaver Somniferum*, of the natural order *Papaveraceæ*; it is obtained by cutting the unripe capsule, from which a white juice exudes, and appears in the form of tears on the edges of the incisions; this is scraped off, put into earthen vessels, moistened with saliva, and then worked up, with a wooden spatula, in the sun, until it attains a proper consistency; it is then formed into cakes, and wrapped up in tobacco or poppy leaves, in which state it is the Opium of commerce, having, by exposure to the air, assumed a dark colour. This is, perhaps, the most important drug in the whole range of the materia medica; we obtain our supply of it chiefly from Turkey and India,—that from the former country is generally preferred: applied externally, it acts as a sedative, lulling pain; given internally, in moderate doses, its first effect is that of an excitant; it quickens the pulse, and increases the heat of the skin; but these symptoms are soon followed by a diminution of sensibility, and a tendency to sleep; if pain is present, it is abated or altogether banished, irritation is diminished, and the muscular system relaxed; the secretion of the bowels is lessened by it, but that of the skin increased, and thus it acts as a sudorific. When taken continually in small doses it causes a kind of intoxication; in over-doses it is a narcotic poison, causing deep sleep, with contraction of the pupil of the eye, which results in coma and death. (For treatment, in such a case, see *Poisons*).

Opium is undoubtedly the best anodyne and soporific with which we are acquainted; but on certain systems its action is directly opposite to that which we commonly look for, therefore it is necessary to watch its effects very carefully; bearing in mind that its primary operation is that of a stimulant, we should avoid giving it in a state of high fever, or inflammation; a parched tongue

and a dry skin, should generally forbid its use; but if there is only moderate fever, with a moist skin, and no cerebral disorder, it may be safely administered to alleviate pain and subdue irritation: in bronchitis, combined with Camphor and Ipecacuanha—as in Paregoric and Dover's Powder; in cancer, delirium tremens, and all neuralgic disorders, it is constantly prescribed; in convulsive disorders, it is given as an antispasmodic; in many cases as a diaphoretic; and in dysentery and diarrhœa, alone, or combined with astringents, there is no medicine so good as this.

The narcotic properties of this drug are chiefly owing to the alkaloid, *Morphia* (which see); of this, good Opium contains about 12 per cent; it is somewhat less stimulating in its action than the juice of the poppy, of which it is the most active principle in combination with *Meconic Acid* (which see).

The common dose of Opium for an adult is from 1 to 3 grains; for children, it should be given in very minute doses, if at all; but it is best avoided altogether: of the mischief which results from the practice of giving children "sleeping-stuff," we have already spoken under the head of *Godfrey's Cordial*, &c., and we would take this opportunity of again warning our readers against a most pernicious custom. Opiates should never be given to the young, except there is a pressing necessity for them, and then very carefully, and not often. There are many official preparations of Opium; we give a list of the principal, with their doses:—Extract, $\frac{1}{2}$ a grain to 3 grains; Pill, 5 to 10 grains: the same, with Calomel, 5 to 10 grains; Lozenges contain each 1-10th of a grain of the Extract; Confection, 10 to 60 grains; Tincture (Laudanum), 10 to 30 drops; Ammoniated Tincture, about 1 drachm; Wine, 10 to 60 minims; Battley's Sedative Liquor, 5 to 20 minims; Black Drop (*Gutta Nigra*), 5 to 10 minims.

There are several preparations which owe their chief activity to the Opium which they contain, although the name of the drug does not appear in their titles: such are the Compound Powders of Ipecacuanha and Kino: the Compound Ipecacuanha Pills, and Pills of Ipecacuanha with Squills, also, the Compound Soap and Storax Pills; the Compound Powder of Chalk with Opium, much used in dysentery and diarrhœa; and the Compound Tincture of Camphor—Paregoric Elixir.

The chief preparations of Opium employed externally are the Opiate Enema, Liniment, Ointment, and Plaister, the

Ointment of Galls with Opium, is an excellent application for Piles.

Any medicine which acts like Opium in producing sleep, &c., is called an *Opiate*, and the principle procured by digesting Opium in Sulphuric Ether, and filtering and evaporating the product, is termed *Opiane*, or *Narcotine*; sometimes, *Salt of Derosnes*, from the name of its discoverer.

Opium-eating has in this, as in other countries, assumed the character of a disease; by many persons it is carried to a great extent. We have known as much as a drachm taken in a day. Those who are habituated to the use of this deadly drug require constantly increasing doses, and become in time, like spirit-drinkers, complete wrecks both in body and mind. They generally begin with small quantities, just enough to lull bodily pain, or soothe mental disquietude; but the habit, if encouraged, grows upon, and eventually enslaves them. A confirmed opium-eater cannot be long-lived, and we would most earnestly warn our readers against the commencement of so pernicious a practice.

OPOBALSAM. The most precious of all the Balsams, commonly known as the *Balm of Gilead* (which see).

OPOPANAX. A gum resin obtained from the *Opopanax Chironium*, a plant of the natural order *Umbelliferae*, which grows



wild in the South of France, Italy, and the Levant. It was formerly held in estimation as beneficial in hypochondriasis, hys-

teria, and asthma; it was also used as an emmenagogue, but modern practice has nearly discarded it as a remedy of very feeble powers.

OPODEDOC. This is the Compound Soap Liniment of the Pharmacopœia, being a solution of Soap in Alcohol, with the addition of Camphor, Oil of Rosemary, and strong Liquor of Ammonia; it is an excellent application for sprains, bruises, &c., and may be used with advantage in all cases in which counter-irritation is required. See *Liniments, Soap*.

OPILATION (Latin *oppilo*, to close up). An old term for obstruction of any kind, but chiefly of the perspiration. Medicines which had the effect of closing the pores of the skin were termed *Oppillatives*.

OPPONENS POLLICIS. The name of a muscle which arises from the annular ligament of the wrist, &c., and is inserted into the thumb, which, by means of it, is brought inwards, so as to meet the fingers.

OPTIC (Greek *optomai*, to see). Belonging to the sight; a term applied to the second pair of nerves, to the two *thalami* of the brain, and to the *foramina* of the sphenoid bone, through which the optic nerves pass.

OPTICS. Is that branch of natural philosophy which treats of the relation between light and the organs of vision. All that is necessary to be said about it in this work will be found under the heads of *Eye* and *Sight*.

OPTICAL DELUSIONS. Are the result of a disordered action of the organs of vision, which may be occasioned by disease affecting the brain, or the optic nerves, or some other part of the delicate machinery by means of which we see; or they may be occasioned by sympathy with disordered functions elsewhere, as in the stomach. These delusions vary considerably in their manifestations; it may be that half an object, or half a word in reading only, is perceived, or real objects in a distorted or exaggerated manner, or those which are altogether unreal; floating specks, flashes of light, &c., before the eyes, come properly under the denomination of such delusions, which are often the result of biliary derangements, and may frequently be removed by a Blue Pill and a Black Draught or two. See *Diseases of the Eye*.

ORA SERRATA. A dentated line constituting the posterior edge of the ciliary processes (see *Eyelids*)

ORANGE. This plant, whose delicious pulpy fruit is so universal an article of consumption, is the *Citrus Aurantium* of botanists, belonging to the natural order *Auran-*

taceæ; it is extensively cultivated in every region of the earth where there is sufficient warmth to bring it to perfection, but our chief supply comes from Spain, Portugal, the Azores, and the islands of the Medi-



terranean. The China Orange, of which the St. Michael's appears to be a variety, is perhaps the most delicious, and this is grown largely in Malta and Provence. The juice of the sweet Orange which consists principally of mucilage, sugar and citric acid, is one of the most wholesome vegetable juices known; it is peculiarly grateful to invalids, who, however, should not swallow the cellular pulp in which it is enclosed, as this is indigestible, and is likely to produce disorders of the bowels, through which it passes unchanged.

The part of the Orange which is chiefly used medicinally is the rind, and the kind which is best for this purpose is the Seville Orange, which is an agreeable aromatic bitter, possessing tonic, stimulant, and slightly astringent properties, it is much prescribed in combination with stronger bitters, such as Gentian, and Quinine, and makes one of the best vehicles for the administration of Epsom and other neutral salts, which it renders less offensive to the palate and stomach. Orange marmalade upon bread is a good breakfast diet for dyspeptic patients; and the Confection of Orange Peel, in doses of from 1 to 4 drachms may also be taken by such with advantage. The Infusion may be easily made by pouring on an ounce of the dried Peel a pint

of water, and letting it stand until cold, then strain and take as a stomachic a wine-glassful twice a day; a little lump sugar and lemon juice will render it more pleasant to take. Syrup of Orange is made by infusing $2\frac{1}{2}$ ounces of the dried Peel in a pint of boiling water, for about twenty minutes, then strain and add two pounds of lump sugar, boil for ten minutes; chiefly used for sweetening and flavouring summer drinks and medicines; for Orangeade (see *Beverages*). The Oil of Orange Peel, is also used for flavouring chiefly, it may be taken as a stomachic on sugar in doses of from 1 to 3 drops. The dose of the Tincture is from 1 to 3 drachms, and of the Powdered Peel from 5 to 30 grains. Orange flowers and their distilled Oil, and Waters, are chiefly used as perfumes, but they are also regarded as anti-spasmodic, and to some extent anodyne; the Water is given on the continent for hysteria, in doses of from 1 to 2 ounces. *Orange Peas* are the immature fruit of some kinds of Oranges, they are used for *Issues* (which see).

ORANGE SKIN is a term applied to the deep yellow hue, sometimes observable in the skin of a newly-born infant; it is termed by Sauvages *Ephelis lutea*.

ORBICULARES (Latin *orbiculus*, a little orb). The name applied to two muscles of the face, termed *O. oris* and *O. palpebrarum*, the first constituting the substance of the lips, and the last arising from the outer edge of the orbital process, and inserted into the nasal process of the superior maxillary bone; this it is which effects the closing of the eye. From the same root we have *Orbicular Os*, the small orbed bone of the ear, and *Orbicularis ciliaris*, the white circle formed by the ciliary ligament, marking the distinction between the choroid and iris. (See *Eye*.) The cavity under the forehead, in which this organ is lodged, is termed the *Orbit*.

ORCHIS (Greek for the testes). Hence the term *Monorchid*, applied to the person with but one testicle, *Orchitis*, inflammation of the Testes, and *Orchotomy*, removal of one or more testicle (see *Castration*).

ORCHIS MASCULA. The Male Orchis, a plant of the natural order *Orchidaceæ*, from the roots of which, and some allied species, is obtained the *Salep* of commerce, a nutritious and wholesome farina, much used in the East as food, and to some extent in Europe also. When carefully prepared, it is one of the best articles of diet for a weakly or convalescent person (see *Salep*).

A Cut of the male Orchis is inserted in next column. it is a common English plant.



ORGAN (Greek *organum*). A part which has a determinate office in the animal economy. We divide organs into 1st, those of *Circulation*, as the heart, and arteries, veins, capillaries, &c. 2nd, of *Absorption*, as the lymphatic vessels and glands, the lacteals, &c. 3rd, of *Sensation*, as the eye, ear, nose, tongue, skin, &c.; in this we include the muscular system. 4th, of *Digestion*, as the mouth, the stomach, the intestines, &c. 5th, of *Respiration*, as the lungs, the trachea, the bronchi, &c. 6th, the *Voice*, as the larynx, the cartilages and muscles of the throat, &c. 7th, of *Secretion*, as the liver for the bile, the kidneys for the urine, the lachrymal glands for the tears, &c. 8th, of *Generation*, as the testes, pelvis, &c., in the male; the pubendum, uterus, &c., in the female.

ORGANIC MOLECULES. A term applied to certain floating bodies said to exist in the male semen, and which have been regarded as primordial monads of peculiar activity, existing throughout all nature, and constituting the nutritive elements of living matter. Dr. Darwin termed these *vital germs*.

ORIGANUM. The name of a genus of plants, in which are the common and sweet *Marjoram* (which see).

ORIGIN (Latin *origo*). The commencement of a muscle from any part, its attachment to the part it moves is called its *insertion* (see *Muscle*).

ORMSKIRK MEDICINE. A reputed remedy for canine madness, first prepared by a Mr.

Hill, of Ormskirk; it is said to consist of Prepared Chalk, $\frac{1}{2}$ an ounce; Armenian Bole, 3 drachms; Alum, 10 grains; Elecampane Root, powdered, 1 drachm; Oil of Aniseed, 6 drops; it is ordered to be taken in fresh milk and water, every day for six successive mornings.

ORTHOPNÆA (Greek *orthos*, erect, and *pneo*, to breathe). An affection in which breathing can only take place when the patient is in an erect position. See *Asthma*.

Os or OSSIS (Latin for *bone*). From this root we have *Ossification*, the formation of bone, the first development of which, according to Carpenter, "is preceded by the formation of a cartilaginous structure, which occupies the place the bone is afterwards to take; and it has commonly been considered that the bone is formed by the ossification of the cartilage, or gristle. This, however, does not appear to be the case, for none of the cartilage—*chondrine*—can be found in perfect bone. The process of true bone formation always commences in the immediate neighbourhood of blood vessels, which pass down into canals excavated in the substance of the cartilage; the spots where these vascular canals are especially developed, are termed centres of ossification. We usually find one of these in the centre of the shaft of a long bone, and one at each end; in the flat bones there is generally one in the middle of the surface, and one at each end of the principal projections. Up to the period when the bone attains its full dimensions, the parts which contain the distinct centres, are not connected by osseous (bony) union, but only by cartilage, so that they fall apart when this decomposes; the purpose is to allow an increase in the size of the bone, by the growth of cartilage between its detached portions, which cartilage may give place to bony structure when there is no further need of increase." Such is the theory of bone formation, according to one of the most eminent physiologists of the day, it differs somewhat from that which has hitherto been generally received, but this difference is not material to the purpose of a work like the present. In addition to what is here given, and the remarks made on the subject under the head *Bone*, we may observe that the changes which take place in component particles of bone after its complete formation is effected, appear to go on very slowly, unless a more rapid process is necessary for the reparation of an injury, such as a *Fracture*, which see. As persons advance in years, the deposition of animal matter in the bones gives

place to a great extent to that of a mineral character, so that the bones become harder and more brittle, and if broken are not so likely to unite and become serviceable again. The joints in old age become stiff and rigid, from this cause; and osseous deposits often take place in structures which hitherto had been quite free from such. Thus we have *Ossification of the heart*, about the valves especially, and the coats of the arteries, giving rise to symptoms of *Angina pectoris*, (which see). Many of the diseases of old age originate in this change in the structure of the arteries, and consequent loss of vital power necessary to keep a healthful state of the circulation. Another part which is very likely to become partially ossified is the larynx. Deposits of earthy matter, analogous to bone in certain osseous affections, has been called *Osteo-sarcoma*. The simple absorption of bone, unaccompanied by secretion of pus—the process by which nature accomplishes the removal of the milk teeth, &c., has been termed *Osteo-anabrosis*. That part of anatomy which treats of bones is termed *Osteology*; a description of them, *Osteography*, the growth of bones, and the ossific diathesis, or affection in which soft parts become indurated by a deposit of osseous matter, is *Ostheuxia*. From the same root *os* or *ossis*, which, no doubt, comes from the Greek *osteon*, we have also the terms *Osteoma*, a bony tumour; *Ostitis*, inflammation of the bone; and *Ostiopædium*, an osseous or stony mass, into which the fœtus is sometimes found to have been converted in the uterus.

Ossa Alba, the name given by Van Hilmont to the precipitate formed by the natural salt of the urine in the production of the calculus; it is the same as that which Paracelsus termed *tartar*.

OSCHEOCELE (Greek *oskeon*, the scrotum, and *kele*, a tumour). Hernia, when it descends into the scrotum, is so called. See *Hernia*.

OSCILLATION (Latin *oscillum*, an image swung upon ropes). This term was applied by Boerhaave to muscular *Irritability* (which see).

OSCITANCY (Latin *oscito*, to gape). Yawning or *Gaping* (which see).

OSTREA (Greek *ostrakon*, a shell). The Latin name of the oyster, the burnt shell of which is sometimes used as an absorbent, under the name *Calx e testis*, Lime from shells.

OTALGIA OTTIS (Greek *otos*, the ear, and *algos*, pain). Pain in the ear, which may be divided into internal and external, the last of which generally ends in suppuration.

ration, or what is commonly called an *imposthume* or *imposteme* in the head; a term corrupted from *aposteme*. When this becomes chronic it is called *Ottorrhæa* (which see), also *Ear* and *Ear-ache*.

OTTO, OR ATTAR OF ROSES. This is, in truth, the oil of roses procured by distillation from the petals; it is well known as a powerful and delicious odour, but has not, that we are aware of, been employed medicinally.

OVUM (Latin for an egg). A small vesicle within the ovarium, containing the embryo or elements of the foetus. Hence *Ovales*, a term applied to a foramen between the auricles of the foetus; *Oviduct*, a name sometimes given to the Fallopian tube, which conducts the ovum to the uterus; *Oviparous*, applied to animals which produce their young in eggs: *Ovorum testæ*, eggshells. *Ovarium*, diminutive of *ovum*, is an ovary, or seed vessel. The ovaries, anciently called *Testes Muliebris*, are the two oval bodies placed in the broad ligament (see *Testes*). *Ovaliger* means a little egg, the name of a kind of hydatid supposed to be found in the articulation of the wrist (see *Hydatid*). *Ovulum* also means a little egg, and is applied to a cell of the Ovarium attached to this organ by what is called the *cicatrix*.

URETIC ACID (Greek *ouron*, urine). An acid discovered by Proust and Bergmann, and shown by Kalproth to be bi-phosphate of soda.

OX GALL. Some years ago the Gall or Bile of the Ox was quite a fashionable remedy for habitual constipation; in many cases it was undoubtedly found servicable, but not perhaps in the majority, and it therefore fell very much into disuse. Where there is a want of tone in the stomach, and especially with pregnant women, it often acts extremely well; it may be prepared for medicinal purposes in the following manner: Buy a Gall bladder and turn out the contents in a shallow vessel, of metal is best; put it in an oven and let it evaporate until it becomes sufficiently firm to make into pills, of which one or two, of 5 grains, each, may be taken twice a day.

OXALIC ACID. An acid found in the state of oxalate of lime, in the roots of several plants; and in the state of bin-oxalate of potash, in the leaves of the *Oxalis Acetosella*, and some species of *Rumex*. Its salts are called *Oxalates*. The Essential Salts of Lemons, or Salt of Sorrel, is the binoxalate of potash, and the oxalate of lime is the basis of the Mulberry Calculus. See *Acids*.

As poisoning by Oxalic Acid is not of unfrequent occurrence, in consequence of its close resemblance to Epsom Salts, a few simple directions for such an emergency had better be given here. When a large dose of the poison has been swallowed, the first and almost immediate effect is complete prostration of strength; the patient sinks at once into a state of collapse, and dies within half an hour after taking the poison; severe pain at the stomach, and vomiting, sometimes precede this state of stupor, but not always. When there is vomiting, the expelled matter is very acid and dark in colour. In such a case, only the most prompt measures can be of any service; the knowledge that Oxalic Acid (in itself readily soluble), forms, in combination with lime and magnesia, insoluble, and comparatively inert compounds, teaches us that Chalk or Whitening is the best remedy; and, happily, one or other of these substances is generally at hand; if not, some old Mortar scraped from the crevices of a wall may be mixed up with water and swallowed. Vomiting should be by all means excited, and plenty of water given to dilute the poison, and favour its rejection from the stomach. In the collapsed stage, stimulants will be required—Brandy is the best; should the patient survive, there is likely to be great irritability of the stomach for some time; for this, soothing demulcent drinks, and a milk diet should be given, and a few leeches may be applied to the pit of the stomach.

OXIDES. (Greek *oxys*, acid or sharp). These are chemical compounds of oxygen, with substances which are neither acids nor salts; they were formerly called *calces*. In medicine, the metallic oxides are an important class of bodies; they are distinguished by certain prefixes, which denote the proportion of oxygen which they contain, such as *prot-oxide*, *deut-oxide*, *trit-oxide*, &c., these three meaning first, second, and third. When the base is saturated with oxygen it is called a *per-oxide*, *per* denoting very much.

OXYCROCEUM. A warm discutient plaister, consisting of Wax, Rosin, Pitch, Turpentine, Saffron, and several Gums; at one time much used as a stimulating application.

OXYGEN (Greek *oxys*, and *gennao* to generate). The name of a gas which forms about a fifth proportion of atmospheric air, and is essential to the respiration of all animals; the above name was given to it by Lavoisier, from the supposition that it was the sole generator of acidity; as it was supposed also to be the sole supporter of combustion. Modern scientific research

have proved that neither hypothesis is quite correct, although sufficiently so perhaps to justify the name applied to this gas. Oxygen for ordinary purposes may be obtained from the binoxide of manganese by the application of heat; but in a more pure state for chemical investigation, or analysis, from chlorate of potash. Oxygen has been described as a permanently elastic fluid invisible, inodorous, and a little heavier than atmospheric air, which it forms in union with azote or nitrogen. Water contains about 89 per cent. of it, and it exists in most vegetable and animal products, salts and oxides. It is not absorbed by water, and is neither acid nor alkaline. It has a powerful attraction for most of the simple substances, especially for the electric positive bodies; the act of combining with which is called *oxidization*. The compounds thus formed are divided into *Acids* and *Oxides*; among the latter are the alkalies, and almost all salifiable bases. Pure Oxygen is too highly stimulating for animal existence, although a certain proportion of it is necessary, and it is precisely according to the proportion which it bears to the nitrogen, that the air we breathe is healthful or otherwise. Oxygen is evolved from trees and plants by the action of the sun's rays on the moistened leaves; and these leaves, while they give out Oxygen, absorb carbonic acid from the atmosphere; just the reverse is the case with animals, and thus the balance is maintained.

Oxygen has been called by Priestley, *Dephlogisticated air*; Scheele, *Empyreal air*; Condorcet, *Vitalair*: (for further particulars respecting it, see *Gases*.)

OXYGENATION. Is a term sometimes used as synonymous with *oxidation*; it differs from it, however, in having a more general import, every union with oxygen being an Oxygenation; whereas, oxidation takes place only when an oxide is formed. There are several other compound terms which imply the presence of oxygen, such as *Oxy-iodine*—a name given by Sir H. Davy to anhydrous-iodic acid; compounds of Oxygen and its compounds with metallic bases were called *Oxyiodes*, and sometimes *Iodates*: *Oxy-Muriatic Acid*, the former name of *Chlorine* (which see); *Oxyprussic Acid*, a name formerly given to *Chloro-cyanic* or *C. Prussic acid*, from its being supposed that the hydrocyanic acid had acquired oxygen in being mixed with chlorine. Another class of terms compounded of *Oxy* had referred to acuteness of sense or functions; thus *Oxyopia*, signifies acuteness of sight; *Oxyphonia*, sharpness or shrillness of voice.

Then, again, this prefix may have reference to shape, as *Oxyurus* (sharp-tailed), the Vermicular Ascaris, a parasitic animal sometimes found in the uterus or its appendages, the intestines, &c., (see *Worms*).

OXYMEL. Is a compound of Honey and Vinegar, very useful in some forms of catarrh and cough; it may be either used alone, or combined with other medicines.

Simple Oxymel is made by boiling together 5 pounds of Honey, with 8 ounces of Water, and 7 ounces of Acetic Acid: and Oxymel of Squills, which is more expectorant, is made by mixing $\frac{1}{2}$ a pound of Honey with 4 ounces of Vinegar of Squills, and applying heat to effect a combination of the ingredients. See *Squills*.

OYSTERS. Dr. Paris altogether condemns these, to most palates, delicious testaceans, as a food for invalids, but on this subject, as on many others, doctors differ, for some recom-



mend them strongly; that they are very nutritious, especially when uncooked, is generally conceded; but some stomachs there are which cannot readily digest them, and others which, although they may be extremely delicate, do so easily; so that without a trial one can scarcely tell how they will suit a particular patient; and as they seldom or ever, like some shell fish, cause symptoms of irritant poisoning, there can be little danger in making the trial; only one or two should be taken at a meal, and the allowance gradually increased to six or eight, taken raw with a little pepper, and vinegar if agreeable.

OZÆNA (Greek *oze*, a stench). An ulcer situated in the nose discharging a foetid purulent matter, and sometimes accompanied with caries of the bones. To render

the factor of this discharge less offensive a lotion composed of chloride of Zinc and Rose Water may be used; about 2 grains of the former to 1 ounce of the latter will be the proper strength; it should be injected upwards through the nostrils with a small syringe, or poured into the hand and snuffed up two or three times a day; or, inject simple red wash (Sulphate of Zinc, Tincture of Lavender and Water), and improving the general health with alteratives, and frequent use of Glycerine. Chief internal remedy:—Iodide of Potassium, 24 grains; Bi-carbonate of Potash, 2 drachms; Compound Decoction of Sarsaparilla, 3 ounces; Water, 5 ounces: two tablespoonfuls 3 times a day. Iodide of Potassium to be gradually increased.

OZMAZOME (Greek *osme*, odour, and *zomos*, broth). A peculiar principle obtained from muscular fibre, having the taste and smell of broth; it is on this that the peculiar and agreeable flavour of cooked meat depends. It is most manifestly developed in decoctions of meat, such as soups, gravies, &c.

OZMIUM (Greek *osme*). A new metal discovered among platinum, and so named from the pungent and peculiar smell of its oxide.

OZMUNDA REGALIS, or Royal Fern, is a plant of the natural order *Filices*, or ferns,



whose root-stocks were formerly employed medicinally. They were thought to be good for the rickets, scrofula, and worms; but are not now held in much estimation.

OZONE. A principle of, or substance in, the atmosphere, for the discovery of which the scientific world is indebted to M. Schönbein; its liberation appears to depend very much upon that of electricity; and it is generally most abundant in summer during stormy weather, and in winter when there is snow falling. From the action of Ozone on the respiratory organs, its discoverer considers that it is likely to be instrumental in producing those catarrhal epidemics which are known to prevail frequently without any assignable cause. Some consider it to be oxygen in a peculiar condition. As yet, however, the nature of the substance, if such it be, is too imperfectly known to allow of a decided opinion.

PABULUM. Food, aliment. The animal heat and spirits are called the *Pabula vite*, or food of life.

PAIN. We are apt to look upon Pain as an unmitigated evil, but it is not so; rather should we regard it as a kind, though sometimes a severe friend, who warns us of danger in the shape of disease or injury, and points out where to apply the remedy. Insensibility to Pain would be by no means so great a boon as most of us would suppose, much as we should desire it; physically, as well as morally, it is good for us to suffer; for Pain is a great teacher of salutary lessons as regards our temporal, as well as our eternal welfare. We feel it in the head, or the chest, or the abdomen, or one or other of the limbs, and, by it, we are admonished that there is something wrong in our habits or mode of life; that we have eaten or drunk too much, or of that which is unfit for us; or indulged in excesses of some kind, or overtaken our powers; or it may be not exerted or exercised them sufficiently: we have in some way impaired this or that part of our wondrously fashioned structure; or it may be that there is some insidious disease eating into some part of our system, and sapping our vital powers, the only indication of whose progress is the Pain which it occasions.

Sensibility to Pain varies greatly in different individuals, and in accordance with the state and condition of the nervous system of the same patient; it is most severe when the nerve itself is the seat of disease or injury, as in tic douloureux and other forms of neuralgia; most usually it is sympathetic, the nerves being only affected as the organs of sensation, through which

all Pain must necessarily be felt. Next to any affection of the nerves themselves, that of the bones and joints probably causes the greatest suffering, probably on account of their unyielding nature; when swollen by disease they press upon the nerves, and so produce this result. Some parts which are most insensible in a state of health are most actively sensitive when they become inflamed: such is the case with some of the internal organs, and also with the bones, joints, and teeth.

Regarded as a *symptom*, we may say that Pain in active inflammation, as well as in its hysterical simulations, is always present and prominent; it is pretty sure to be felt in congestion of any part; in all malignant affections it is generally very acute; in most kinds of fever it is complained of in the limbs and back; in indigestion and dyspepsia we have it in the stomach, as we do also in colic and spasms of that part; "a stitch in the side," as Pain there is commonly called, may be owing to flatulency, and when it is in the chest, and increased by inspiration, there is reason to suspect an attack of pleurisy, or pneumonia, or a broken rib. Gripping in the bowels may be due to colic, or to the presence of some acrid kind of food, or to inflammation of the peritoneum, or to diarrhoea, dysentery, or cholera; throbbing Pains in the temple, darting or shooting Pains in the breast, flying Pains about the shoulders and elsewhere, dull heavy Pains in the head, and a hundred other Pains that could be named, are all characteristic of some particular form of disease, although they do not all indicate the exact parts to which the disease is referable, they may be nervous sensations telling that mischief is going on somewhere, and calling on the sufferer to investigate the matter, and apply remedies; thus headache commonly arises from a disordered stomach, and a blow on the head will often cause Pain in the bowels, and sickness.

The alleviation of Pain is one of the great objects of all medical treatment, and this chiefly on account of its exhaustive nature—its debilitating effect upon the constitution, which is greater or less, of course, in proportion to its severity, and to the degree of nervous susceptibility of the patient; it is quite possible for a person to die of Pain alone; hence the value of anæsthetics and opiates which deaden sensibility, and render possible, and indeed easy, the most formidable operations, the agony of which could scarcely be borne by weak and delicate patients. We should not, however, resort

to these means of alleviating Pain too hastily, or too frequently; there is always danger attending their use, and it is frequently better for suffering to be borne than to be thus relieved; opiates always interfere, more or less, with the action of the secretory and excretory functions of the body; and under the action of anæsthetics, such as ether and chloroform, insensibility has resulted in death. In all cases, therefore, the advantage to be gained by the alleviation of Pain, must be well weighed against the disadvantages, and probable danger of resorting to the necessary means.

PAINTER'S COLIC. Is the result of the absorption of lead into the system; its *symptoms* are similar to those of *Colic* generally (which see), with partial paralysis often superadded: sometimes this latter symptom will show itself while the patient is in an average state of health, and previous to, or conjointly with the writhing pains in the stomach, cramp in the legs, and pains in the head and limbs; but more frequently there will be two or three attacks of the Colic before the paralysis comes on.

Treatment. The same as in other forms of Colic; if the spasm is violent, and the patient of a full habit, blood may be taken from the arm; in any case, warmth should be applied to the seat of pain; friction, with stimulating liniments; the feet and legs should be placed in a mustard bath, and a full dose of Calomel and Opium given, followed in about an hour with one of Castor Oil; the injection of warm water into the bowels frequently affords great relief; if they are not freely opened by the above means, stronger purgatives should be given, such as Colocynth and Calomel, or 1 drop of Croton Oil with Castor Oil. From the first or second attack of Painter's Colic persons generally recover; but, unless the occupation is changed, other attacks will follow, and the patient will become a miserable cripple. See *Palsy*, *Paralysis*.

PAINTER'S PURGE. A medicine sometimes given in the form of colic above described, and consisting of $\frac{1}{2}$ an ounce of Senna boiled in a pint of water, with $\frac{1}{2}$ an ounce of Sulphate of Magnesia, and 4 ounces of Antimonial Wine, added to the strained liquor, while hot; a wineglassful may be taken every 3 or 4 hours, until relief is obtained.

PAINTING. Very marked injurious effects have often arisen from inhaling the atmosphere of newly-painted houses; that the head-ache, sickness, and other uneasy feelings which arise from this will pass away, and leave no after ill-effects, is the belief of

most persons, but we have known cases in which the poison, though slight, has worked upon the system, and materially affected the health through life. That it is a poison which is thus inhaled, we have sufficient evidence in the circumstance that on the delicate lungs of a song-bird it acts as such, causing death very rapidly; whether, as some say, the injurious effects are produced by the fumes of the turpentine used in oil-paints, or to the subtle emanations of the lead, we cannot say; but we would warn our readers to avoid, by all means, living or sleeping in newly-painted houses; or, if they are obliged to do this, to admit as much fresh air as possible, and to be out of doors as much as circumstances will permit; children, especially, should be kept away from this morbid influence.

PALATE (Latin *palatum*). The roof of the mouth; at the back of it is situated the Soft Palate (*velum palatum*). The arched ridge which forms the roof of the mouth, and is distinguished as the Hard Palate; commences behind the upper teeth, extends backwards, and merges in the Soft Palate, which is a fold of the mucous membrane, lining the whole of the mouth; from its centre depends the *Uvula* (which see), and from each side of which proceed two other folds of membrane, having between them the *Tonsils* (which see); these folds, by closing over the root of the tongue, prevent the food which is in the act of being swallowed from passing back into the mouth, while the Soft Palate bars its passage into the nose. Those who suffer from indigestion have frequently small blisters on the membrane which covers the Hard Palate, for which no local application will be of much service. There is sometimes a congenital deficiency of the Hard Palate, and both speech and taste are imperfect in consequence; the former may be amended by a metallic plate introduced to fill up the gap. Sometimes the fissure extends through the Soft Palate, and divides the uvula into two parts; this defect is commonly associated with hare-lip, and can only be repaired by an operation, which from the improvements introduced by Fergusson and others, is now generally successful. See *Nose, Throat, &c.*

PALATO-PHARANGEUS. The name of a muscle which arises from the arch of the palate, and is inserted into the thyroid cartilage and the pharynx; it draws the uvula downwards and backwards, and closes the back of the nostrils.

PALLIATIVES (Latin *pallium*, the outer robe of the ancients). Medicines for relieving pain. These are, in many cases, all

that even the professional man can administer, and they must necessarily form a very large proportion of the remedies available in domestic treatment, in which the chief aim is, or ought to be, to mitigate pain, and relieve the most urgent symptoms, until professional aid can be obtained. Still, while recommending to our readers the use of palliatives, we would urge upon them also the necessity of due caution, lest they "kill" while attempting to "cure." In all cases of emergency, we say, send for the Doctor; but if, as is frequently the case, his help cannot at once be had, resort to such palliative medicines and measures, as your knowledge and experience, aided by these pages, enables you to apply.

PALM. The inner and softer part of the hand; the framework of which, and of the back, is composed of the metacarpal bones (see *Hand*). The *Palmar Arch* is a branch of the radial artery which passes over these bones; and the *Superficial Palmar Arch* is a continuation of the ulnar artery, which also crosses the metacarpus. The *Palmaris longus*, and *brevis*, are two muscles of the Palm, whose skin is stretched and contracted by means of the latter of these.

PALMA CHRISTI. Is a species of Palm tree, from which is obtained *Castor Oil* (which see).

PALM OIL. Is obtained from the kernel of the Cocoa-nut tree, and some other species of Palms; it is thought to be especially softening to the skin, and is used as an external application, like *Olive* and other *Oils* (which see).

PALO DE VACCA. The Cow-tree of th



Caraccas and Cordilleras, whose scientific name is *Galactodendron Utile*; it yields an

abundant supply of vegetable milk, equal and similar to that obtained from the cow, only that it is slightly viscid, and somewhat different in its composition, more than half of its bases being wax and fibrin, a little sugar, a magnesian salt, and water; it is wholesome and nourishing, and has an agreeable balsamic odour. The natives of the countries where it is produced drink it in large quantities, and are said to grow fat upon it.

PALPATION (Latin *palpo*, to feel). The act of feeling; a method of examining the abdomen by touch or pressure for the purpose of ascertaining its size, form, &c. From the same root we have *palpi*, feelers, as of some insects; and probably also *Palpebræ*, the *Eyelids* (which see).

PALPITATION (Latin *palpito*, to throb). An increase in the force or frequency, or both, of the heart's contraction; when it results from loss of blood, it is termed *reaction*. Palpitation of the Heart is a very common affection; it may amount to only a slight fluttering, or to a violent beating or throbbing, and may be either regular or fitful and uncertain; it is common with young persons of both sexes, but especially hysterical females, and is easily brought on by any unusual mental emotion, as well as by much or too violent bodily exertion. See *Heart*.

PALSY Probably contracted from the Greek *paralysis* (which see).

PAMPINIFORM (Latin *pampinis*, a tendril, and *forma*, likeness). Resembling a tendril; a name applied to the spermatic cord.

PAN (Greek for all). There are several medical terms which have this prefix, such as *Panchrestus*, applied to medicines in the same sense as *Panacea*, from their real or presumed general usefulness; *Pandemic*, synonymous with *Epidemic*; *Pantagogues*, medicines which expel all morbid matters; *Pantaphobia*, a fear or dread of all things; old authors use this term to express some of the symptoms of hydrophobia. Also

PANACEA (Greek *pan*, all, and *akeonai*, to heal). Any drug or preparation said to be a remedy for all kinds of diseases, which is simply an absurdity. In some of the old Pharmacopœias we find the name *Panacea* applied to several preparations of a legitimate character: thus Sulphate of Potash, was termed *P. Duplicatio*, and *P. Holætica*; Kermes Mineral, *P. Glauberiana*; Submuriate of Mercury, *P. Mercurialis*; and Saffron, *P. Vegetabilis*.

PANADA, OR PAP (Latin *panis*, bread). This is bread boiled in water to a proper

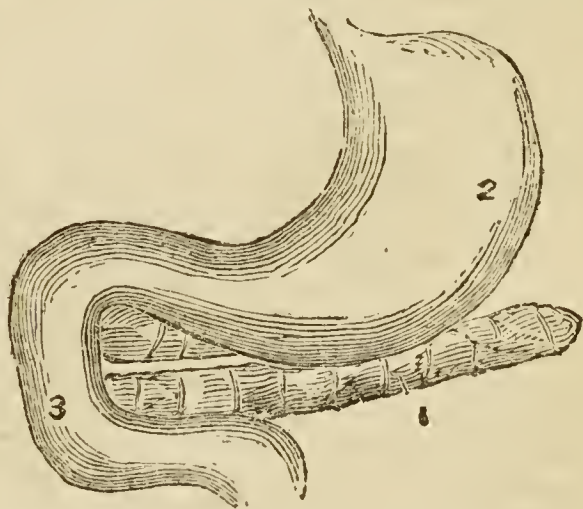
consistence, and then beaten up smooth with a little sugar and milk; it is chiefly used as food for *Infants* (which see).

PANCAKES. Are decidedly unsuitable for invalids; the forms of making them vary greatly: in most of them wheaten flour forms the principal foundation, combined with eggs, milk, and butter, dripping, or lard; they are lightest, when made with perfectly clean, newly-fallen snow, and most wholesome with a little salt and ginger added. For receipts, see *Wife's Own Book of Cookery*.

PANARIS (Greek *para*, near to, and *onyx*, the nail). Sometimes called *Panaritium*, corrupted from the Latin *Paronychia* or *Whitlow* (which see).

PANCHYMAGOGUES (Greek *pan*, all; *xymos*, juice; and *ago*, to expel). The name formerly applied to purgatives which caused evacuations, mixed nearly equally with the humours of the intestinal canal; thus calomel was called a Panchymagogue.

PANCREAS (Greek *pan*, and *kreas*, flesh). Literally all flesh; the name given to a gland which is situated transversely in the abdomen behind the stomach; it is made up of numerous small glands, the ducts of which unite and form the *Pancreatic duct*, through which the fluid secreted by the gland, and called the *Pancreatic juice*,



passes into the duodenum, through an opening common to it and the bile, combined with which, it mingles with the food in a state of pulp, called chyme. The use of the Pancreatic juice has not been clearly ascertained; it consists of albumen, salivary matters, and osmazome, and may be intended to neutralize the acid of the partially-digested food, and render it fit for the purposes of nutrition. The shape of the Pancreas is that of a long flattened lobe, about six inches in length; its ordinary weight is about four ounces; at the front part of the head of it is a fold of the gland,

which completes the canal of the superior mesenteric vessels, and is called the Lesser Pancreas. In cattle this organ is called the *Sweetbread*, a delicacy with which our readers must be sufficiently familiar, and in which they have an opportunity of studying the structure of the gland, if they are so inclined. The foregoing cut exhibits its form and position in the human system. 1 is the Pancreas; 2, the lower portion of the stomach; 3, the duodenum (see also *Abdomen*).

PANDICULATIO (Latin *pando*, to spread). A term applied to an elongation of the exterior muscles.

PANNICULUS CARNOSUS (Latin *panniculus*, diminutive of *pannus*, a covering, and *caro* or *carnis*, flesh). Applied to the fleshy covering of any part: *Pannus*, means literally a piece of cloth, or a rag. This is the designation of that state of vascularity of the cornea, in which the mucous covering is so loosened and thickened as to present the appearance of a dense pellicle.

PAPAYER. The name of a genus of plants belonging to the natural order *Papaveraceæ*, in which are the Red and White Poppies. See *Poppy*.

PAPILLÆ (Greek *pappos*, the sprout of down, or buds). This term denotes the small projections which constitute the roughness of the upper surface of the tongue. They are distinguished as *lenticular*, which are situated at the posterior part of the organ; *fungiform*, near the edges, presenting a rounded flat head, with a narrow pedicle or footstalk; conical, sometimes called *papillæ medię*, occupying almost the whole of the upper surface, and resembling small cones; and *filiform*, or thread-like, observed quite at the edges of the *Tongue* (which see). *Papillæ* is also a term applied to the nipple which arises in the middle of the areola of the *mammæ* (see *Breast*), and to the small flattened prominence formed by the optic nerve in the interior of the globe of the *Eye*; this is called *Papilla cornea*.

PAPPUS is the Greek term applied to the seed crown, or little tuft of hair which crowns the seeds of certain genera of plants, especially those which belong to the great families of the *Compositæ* and *Valerianææ*. Familiar examples may be seen in the Thistle and the Dandelion. The term is also used to signify the down or mossiness of the under lip, the cheek, &c.

PAPULA (of the matter or nature of *Pappus*). is a pimple or small elevation of the cuticle, with an inflamed base, very seldom containing a fluid, or suppurating, and commonly terminating in scurf. it is

the *echthyma*, and *exormia* of the Greeks. According to Bateman there are three varieties of Papulous eruption:—1st, *Strophulus*, or Green Rash; 2nd, *Lichen*, Lichenous Rash; 3rd, *Prurigo*, Pruriginous Rash. See *Rash*, *Skin Diseases*.

PARA. Is a Greek preposition, admitting of various significations; it is a prefix to several medical terms, as will be seen by the following.

PARACENTESIS (Greek *kentio*, to perforate). The operation of tapping or making an opening into the abdomen, thorax, or bladder, for the purpose of discharging the fluid contained therein. See *Tapping*.

PARACUSIS is one of a class of terms in which the Greek preposition *par* always means a faultiness, or morbid state; the above signifying morbid hearing; while *Parapsis* is morbid touch; *Parabysma*, morbid congestion; *Paracyesis*, morbid pregnancy; *Parageusis*, morbid taste; *Paramenia*, Mis-menstruation; *Paraphonia*, altered voice; *Parodinia*, morbid labour; *Paroniria*, depraved dreaming; *Paropsis*, depraved vision; *Parosmis*, morbid smell; *Parostia*, Mis-ossification; *Paruria*, mis-micturation, &c.

PARALYSIS (Greek *lyo*, to relax). The total loss or diminution of motion, or sensation, or both, in any part; it is termed by Celsus *Resolutio nervorum*, and often called *Palsy* (which see). There are several kinds of Palsy or Paralysis, such as the *Paralysis agitans*; the Shaking, or as it is sometimes called, from the peculiarity of the patient's gait, the Dancing Palsy; *Hemiplegia*, when one side of the body only is smitten; and *Paraplegia*, when it is the lower half which is more or less deprived of its nervous power; but in all cases it is the brain, which is the seat of disorder; and if this is confined to one of its hemispheres, the attack, if it does not include both sides, is most likely to fall on the opposite side of the body. The rupture of a vessel in the brain is one of the most common causes of Paralysis, and this may occur without there being any decided apoplectic symptoms; a slight transient faintness, and confusion of ideas, may precede the attack, or it may come on during sleep, so that the patient may only be made aware that he is paralysed by his inability to speak plainly, or to move a limb or one side of his body. Sometimes the attack is gradual, and occupies a considerable time—days, weeks, and even months elapse before the loss of nervous energy becomes complete; and this helplessness may be produced by a succession of slight shocks, as it

were, or by the gradual stealing on of an apparently torpid condition; this latter is more commonly the case when the disease arises from a decided state of general debility, which in time involves the brain, until the structure gives way, and softening is the consequence. Literary men, and all who have much head work, are especially liable to that condition of the brain which causes Paralysis, and so are hard drinkers, and others whose lives or habits necessitate a frequent state of cerebral excitement; with such the progress of the disease is probably rapid; if of full habit, they will, it is likely, die quickly of apoplexy; if of spare, they will sink into a state of mental and bodily imbecility; in either case they may be subject to epileptic fits.

It is all nonsense to talk of a cure of Paralysis. Palliatives may be tried, and, in some cases, with a certain measure of success: there may be a partial restoration of power to the helpless leg or arm; the speech may become less thick, and the face less perceptibly drawn on one side; but we never yet saw a case of complete recovery, nor one in which there was not, sooner or later, a renewal of the attack. True, some paralysed persons live to a good old age, and are enabled to enjoy themselves, and perform the duties allotted to them; but seldom, if ever, do they become like unto their former selves; there is a little dragging of the foot in walking, the hand cannot grasp so tightly, nor the arm be lifted so quickly and readily in obedience to the will as formerly; there will, also, probably be a little hesitancy or thickness of speech, and the two sides of the face will not quite correspond.

In the above observations we have already hinted at some of the *causes* of this seizure, one of the chief being pressure upon or disease of the brain or spinal cord. When confined to the lower part of the body, there may be reason to believe that the defect of power is in some cases but functional: in this case the cause may be long exposure of the lower limbs to wet and cold, self abuse, excessive indulgence in venery, inflammation of the bowels or kidneys, effusion in the spinal cord from a blow, a burn, or other injury; disease of the womb, or of the urethra, may also give rise to it. Palsy of either of the limbs may be caused by pressure, and general Palsy by the action of lead, or mercury, upon the system; therefore those who work in these metals are peculiarly liable to be so affected, such as button-gilders, glass-silverers, plumbers, &c. (see *Painters' Colic*). The

most dangerous form of this kind is when it affects the muscles of respiration, in which case it rapidly proves fatal. Among the premonitory *symptoms* of Paralysis may be named head-ache, confusion of ideas, loss of memory, impaired vision, drowsiness, and partial stupor, with, frequently, numbness and pricking or tingling sensation in the limb or part about to be attacked. With persons of a full habit, there will be heat and flushings in the face, and most of the signs of an approaching fit of apoplexy; then follows indistinct articulation, loss of power, and the other marked and unmistakeable indications of an actual attack.

The proper *treatment*, in the case of a patient of a full habit, will be bleeding and cupping in the neck, and strong purgatives, about 5 grains of Calomel, followed by Senna Mixture, or Croton Oil Pills every four hours, until they operate freely; when there is faintness and confusion of intellect, give a teaspoonful of Sal Volatile in a glass of water, and repeat it in an hour if required; no alcoholic stimulant must be administered; put the feet and legs in a hot mustard bath, and place the patient in a warm bed, with the head and shoulders well raised. Follow up the cupping in the neck with a blister, and after that, put in a seton, if required; after they have once acted well, keep the bowels gently open with Rhubarb or Castor Oil; let the diet be spare, and the quietude of the patient as perfect as possible. After the acute stage of the disease has passed, local stimulants should be used, and the affected parts well rubbed with the hand, or a flesh-brush. Electricity and Galvanism may also be employed, where there is no reason to suspect structural disorganization. In paraplegia it is often very difficult to get the bladder to act; and when it does, the urine flows from it involuntarily; great attention should be paid to this, and stimulant diuretics given; the Tincture of Cantharides, in $\frac{1}{2}$ drachm doses, is, perhaps, the best.

In some cases, much relief has been afforded by the use of Sulphur Baths and Chalybeate Waters, such as those of Harrogate and Baden. Mercury, which is strongly recommended by some, is but a doubtful remedy. Strychnia has proved serviceable, but should only be given under medical superintendence. Repeated moxæ along the course of the spine, and small blisters on the insides of the legs and thighs, are recommended by Dr. Graves.

In Palsy of the face, if it is caused by a blow, a few leeches behind the ear, and at the angle of the jaw, may prove beneficial; if cold is the cause, hot fomentations and

stimulating liniments should be applied; as also in Palsy of the hands, fingers, or other extremities, with Electro-magnetism, persevered in for a considerable time. In all cases of chronic Paralysis, it should be borne in mind that the nervous system requires arousing and stimulating to a due performance of the functions necessary to life, in nearly all there is a sluggish action of the bowels, which are often obstinately constipated, and require the strongest purgatives to keep them at all open; it is sometimes better to employ enemas, than continue giving drastic medicines. The paralytic patient frequently enjoys pretty good general health, and eats largely, and this increases the above difficulty, especially if it be a heavy person, with little power of self-movement. When confined entirely to bed, sores and sloughing ulcers are not uncommon; these should be treated as directed under the head *Bed-sores*. An air or water bed greatly obviates the danger of them.

Wasting Palsy has been described as a kind of blight, which withers the muscles; it is said by Dr. Morgan to be a fatty and granular degeneration of the muscular fibres, which comes on in consequence of the exhaustion of inherent muscular irritability produced by over exertion of the particular muscles affected, or by cold. See *Atrophy*.

PARAPHIMOSIS (Greek *para*, and *phimo* to bridle). An affection of the prepuce, in which it is drawn quite behind the glans penis, and cannot be brought forward again. Good calls this *Strangulating Phimosis*. It is sometimes termed *Circumligatura*. See *Phimosis*.

PARASITE (Greek *para* near to, and *sitos* provisions). Literally this means, a hanger-on at the tables of the great; hence it is employed to designate animals found in the blood, intestines, &c., of man, or other living creatures, such as the hydatids of the brain, intestinal worms, &c. It is also the general name of plants which grow upon others, as moss, mistletoe, &c.

PARAGORIC (Greek *para*, and *goreyo* to mitigate). A medicine which relieves pain: this is a name formerly given to the Compound Tincture of Camphor, which is still often called Paregoric Elixir. Of this preparation 1 ounce contains 2 grains of Opium; the Scotch Paregoric, called also Ammoniated Tincture of Opium, is twice as strong as this, and should be given carefully, especially to children. These preparations are employed beneficially in cases of cough, unaccompanied by inflammation, chronic asthma, and hooping-cough; the dose of the common sort is from $\frac{1}{2}$ a drachm to 2

drachms; for children, from 5 to 10 minims in Barley Water, Linseed Tea, Almond Emulsion, or some other mucilaginous fluid may be given. See *Coughs*, *Opiates*.

PAREIRA BRAVA. The root of the *Cissampelos Pareira*, of the natural order *Menosperrnaceæ*, it has a bitterish sweet taste,



and tonic, diuretic, and aperient properties; it is much valued by the Brazilians as a remedy for urinary obstructions.

PARENCHYMA (Greek *enchyo*, to pour out). A term now applied to the connecting medium of the substance of the liver, lungs, &c.; and in botany to the green juicy layer of bark which lies immediately under the epidermis of trees. The term was first employed by Erasistratus, under the impression that the common mass, or inner substance of a viscus, is produced by concremented blood, strained off through the pores of the blood-vessels, which enter into its general structure or membranes.

PARIETALIA (Latin *paries*, a wall). The name of the bones of the cranium, sometimes called the Parietal bones; they are so named because they serve as walls to the Brain (which see).

PARILLINE. The alkaline basis of *Sarsaparilla* (which see).

PARISTHMITIS (Greek *isthmos*, the fauces). This is the *paristhma* of Hippocrates; the *squincy* or *squinancy* of some later medical writers, and the *cynanche* or *angina* of the moderns.

PARONCHIA (Greek *onyx*, the nail). An abscess at the end of the finger, near the nail (see *Whitlow*). When the effusion presses on the periosteum, it assumes a malignant form, and is termed *Felon*.

PAROTID (Greek *otos*, the ear). The

name of a gland situated near the ear. Its excretory ducts united form the duct of Steno. From the same root we have *Parotitis*, which is inflammation of the Parotid gland, being the *cynanche parotidæa* of Cullen; called in France, *oreillons* or *ourles*; in Scotland the *Branks*, and in England, the *Mumps* (which see).

PAROXYSM (Greek *oxys*, sharp). A periodic exacerbation, or fit of a disease.

PARSNIPS. The roots of the *Pastinica Sativa*, belonging to the natural order *Umbelliferae*, are, when the plant is cultivated, thick, fleshy, sweet, and mucilaginous; they are a highly nutritious table vegetable, and have been made, in times of scarcity,



into an excellent bread: a wine is also prepared from them, resembling the Malnsey of Madeira and the Canaries. All domesticated animals feed and fatten on them; their composition has been found to be—79.4 of water, 6.9 of starch and fibre, 6.1 of gum, 5.5 of sugar, and 9.1 of albumen. In its wild state, the Parsnip root is not wholesome; it has been known to produce vertigo and delirium on those who ate it.

PARTURITION (Latin *parturio*, to bring forth). The act of bringing forth, or being delivered of a child. See *Labour*.

PARULIS (Greek *oylon*, the gums). An inflammation, boil, or abscess in the *Gums* (which see).

PAR VAGUM (Latin for wandering pair). A name given to the eighth pair of nerves, called the *Pneumo-Gastric*, being those which excite the lungs, the heart, the stomach, &c.; by some this is called the *Exciter of Respiration*.

PASSION. It is generally admitted by surgeons that the action of the heart is greatly influenced by violent mental emotions, and those who give way to strong Passions always run a great risk of laying the foundations of disease, in that important organ, if they do not at once suffer the punishment of their unbridled licence. Passionate persons are often themselves either during a paroxysm, or immediately after it, sensible of feelings about the regions of the heart, which are neither natural nor healthful, and we have not unfrequently been consulted by such as have been greatly alarmed thereby. Instances of persons falling dead in a fit of Passion, with imprecations on their lips have been recorded; and many a blood-vessel has been ruptured in the mental tempest of uncontrolled passionate emotion.

PASTA, or PATE. The former word is Latin, and the latter French; they both signify a preparation made with mucilaginous and saccharine substances, a kind of lozenge, such as the *Pâte de Jujube*. In this kind of confectionery, as in most others, the French excel; this word *Pâte* also means paste, and hence we have *Pâte Arsenicale*, Arsenical Paste. A preparation sometimes applied to cancerous ulcers. See *Arsenic*.

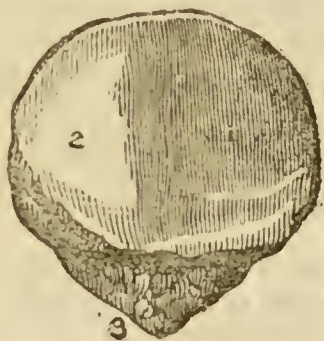
PASTE, or PASTRY. Every housewife knows how this ought to be made, therefore it is quite unnecessary for us to occupy our space with a description of the process. We have merely introduced the subject to warn our readers against it as an article of diet for those who have weak digestive powers, who do not lead a very active life, or who are at all inclined to be bilious. We scarcely expect, however, that our warning against the use of rich Pastry, will be of any avail; it is one of the nice things that people will eat and take the consequences, however much the Family Doctor may protest against the practice.

PASTILLE (Latin *pastilla*). A composition of sweet-smelling resins and aromatic substances, used for fumigating sick-rooms, &c., they simply overpower, but do not render innoxious, unpleasant and unhealthful odours, and although commonly regarded as disinfectants, are by no means such. In most cases it is better perhaps to endure a bad odour than to hide it, unless its mischievous properties can be neutralized or destroyed; still it is sometimes desirable, if not necessary, to overpower an unpleasant scent with an agreeable one, and then Pastilles may be resorted to; they may be made in the following manner:—Take of

Gum Benzoin and Cascarilla Bark, each 1 ounce; Saltpetre, 6 drachms; Gum Myrrh, $\frac{1}{2}$ a drachm; Charcoal, $1\frac{1}{2}$ ounces; Oil of Nutmeg and Cloves, each 9 or 10 drops; the ingredients must be finely powdered, and well mixed together into a stiff paste with Mucilage of Gum Tragacanth; then made into small cone-shaped lumps, and dried: when required for use apply a light to the apex, and if properly prepared the cone will ignite, and burn gradually down to the base, diffusing an agreeable odour.

Pastilles for Sweetening the Breath are made thus:—Cinnamon and Orris Powder, of each 2 drachms; Soft Extract of Liquorice, 4 drachms; Oil of Cloves $\frac{1}{2}$ a drachm; mix and make into 1 grain pills; let one dissolve in the mouth occasionally.

PATELLA (Latin diminutive of *patina*, a pan). Literally a little pan; applied to the knee-cap, or pan; it is a small bone of an irregular heart-shape, as here exhibited.



The right side of the Patella is here shown; 1, is the surface of the articulations with the external condyle of the femur; 2, the surface of articulation with the internal condyle; 3, the apex of the bone, the whole of which is contained within the tendon of the extensor muscles of the lower extremities. Fracture of the Patella is of no unfrequent occurrence; for cause and treatment (see *Fractures*; also *Knee*).

PATHETICI (Greek *pathos*, passion). A name given by Willis to the fourth pair of nerves, because the eyes by means of these give expression to certain passions.

PATHOLOGY (Greek, *pathos* disease, and *logos* an account). That branch of medical science which investigates and describes the nature of diseases; hence every professor of the healing art must be a *Pathologist*.

PAULINA CONFECTIO is a warm opiate, similar to the *Confectio Opii* of the Pharmacopœia.

PAVILION. A name given to the *alæ* constituting the greater part of the external Ear (which see).

PEACH. The *Amygdalis Persica* of botanists, is very nearly allied to the almond,

and, generally, included in the same family; its fruit when ripe, and eaten in moderation is not unwholesome. This plant, like all



of the almond tribe, yields hydrocyanic acid, which may be obtained from the kernels, blossoms, and young leaves. The Nectarine is but a smooth-skinned variety of the Peach.

PEARLASH. A common name for the impure carbonate of potash.

PEARL BARLEY. The decorticated seed of the common *Barley* (which see) and *Gruel*.

PEARL EYE. An old English name for *Cataract* (which see) and *Eye*.

PEARL POWDER. A preparation obtained from the nitric solution of bismuth, remarkable for its pearly lustre; it is sometimes used as a *Cosmetic* (which see).

PEARL WHITE is the name applied to the magistery or sub-nitrate of *Bismuth* (which see).

PEAR. This tree, called by botanists *Pyrus Communis*, and belonging to the natural order *Rosaceæ*, is a native of the woods of Britain, and other parts of Europe, where it grows wild, and from this have originated all the cultivated varieties known, most of which, if eaten ripe and fresh, are not unwholesome, but they are liable to very rapid decomposition, and, hence, are frequently taken in an unwholesome state, and cause disorders of the stomach and bowels; some of the harder varieties are well adapted for baking and preserving. Pear marmalade is an agreeable article of

diet, and is not likely to disagree with those who take it occasionally and in moderation;



neither is Perry, which is the expressed and fermented juice of the Pear.

PEAS. These with beans, lentils, and other members of the *Leguminiferae*, or pod bearing order of plants, are largely used as an article of diet. All the varieties of



garden peas which are cultivated have been derived from the *Pisum Sativa*, a native of the south of Europe.

The field Peas have been derived from

another species called the *Pisum Arvense*. When eaten young and in a fresh state, "Green Peas," as we call them, are wholesome and digestible, but, afterwards, the skin becomes tough and indigestible, and by lodging in the folds of the colon, or larger bowel, frequently occasions irritation and diarrhoea. When young, Peas contain a considerable proportion of saccharine matter, and when ripe and dry, like other leguminous plants, they contain much vegetable caseine analogous to the curd of milk; hence, the nutritive properties of Pea meal, which contains more plastic matter adapted for building up the animal tissues than that of wheat, oats, or any other kind of grain. The same may be said of the meal of beans and lentils, which last forms the staple of the Axta Mankaz, Revelenta, and other preparations advertised as food for invalids.

PEAS FOR ISSUES, as they are termed, are very commonly not Peas at all; the pips of unripe oranges are frequently used, and sometimes a composition of tow or flax with gum and wax, &c. See *Issues*.

PECTIC ACID (Greek *pektis*, a coagulum). A substance obtained from the carrot and other vegetables, and so named from its remarkable tendency to gelatinize.

PECTINÆUS (Latin *pectin*, the pines). The name of a muscle which arises from the brim of the pelvis, whose office it is to bend and rotate the thigh. The Latin word *Pectin*, also means a comb, hence the term pectinated, toothed like a comb; the muscular fasciculi of the part are termed from their peculiar formation, *Pectinati Musculi*.

PECTORALIS (Latin *pectus*, the breast). The name of the muscles of the trunk, called *P. major* and *P. minor*, the first of which arises from the clavicle at the edge of the sternum, and the cartilages of the three lower ribs, and is inserted into the humerus; it is a muscle of respiration, and moves the arm forward, &c.; the second arises from the third, fourth, and fifth ribs, and is inserted into the scapula; it draws the shoulder bone forwards and downwards, and elevates the ribs. *Pectorals* is a name given to medicines which relieve disorders of the chest. *Pectiloquy*, a chest sound, or auscultation of the voice by means of the *Stethoscope* (which see).

PEDICULUS (Latin, diminutive of *pes*, a foot). Literally, a little foot; hence, in botany, the footstalk of a leaf or flower, is called a *peduncle*; but the application of the term which chiefly concerns our subject, is to certain species of troublesome parasites, among which are *P. humanis*, the common louse, chiefly infesting the head;

and *P. pubes*, the crab louse; both of these may be got rid of by means of an ointment of White Precipitate, and strict personal cleanliness. From the same Latin root *pes*, comes the term *Pediluvium*, or foot-bath (see *Bath*); and from *Pediculus*, or little louse, we have *Pediculatum*, an affection caused by the breeding of lice under the skin.

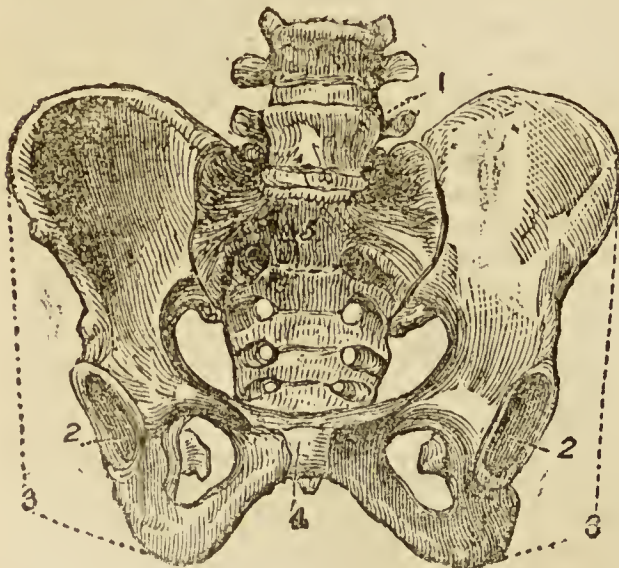
PELLAGRA (Latin, *pellis* the skin, and *agra* wild). An affection in which a morbid condition of the skin is a prominent symptom; it is very prevalent among the peasantry of the northern states of Italy, where it is called *Mal del Sole*, being ascribed to the action of the sun's rays; it is a form of *Elephantiasis* (which see).

The term *Pellicle*, which is a diminutive of *Pellus*, means a thin film or skin; among chemists it signifies a thin surface of crystals, uniformly spread over a saline liquid evaporated to a certain degree.

PELLITORY. The root of the *Anacyclus Pyrethrum*, of the natural order *Compositæ*, is much used, under the name of Pellitory of Spain, as a masticatory to relieve tooth-ache; it enters into the composition of certain snuffs, and by the Turks is rubbed into the skin to excite transpiration. It is a powerful irritant, and in certain forms of headache, rheumatic, and neuralgic affections, frequently affords relief; it is said in some instances to have cured obstinate cases of spontaneous salivation; it has also been used as a local stimulus in palsy of the tongue, or throat, and in relaxation of the uvula.

PELVIS (Greek for a basin). This is the lower part of the abdomen, containing the bladder and rectum, and in woman also the uterus. We give a cut of this important

rests upon the thigh-bones, whose rounded heads fit into the cups, or cavities, (2 2) of the pelvic bones; these hollows are known as the *acetabula*. We may remark that the Pelvis consists essentially of three distinct masses of bone; two of these are the *os innominata* (nameless bones), marked by the figure 3; they form together the sides and front of the pelvic cavity, being united in front, at fig. 4, by a triangular bone called the *os sacrum*, fig. 5, which fits like a wedge between the two side bones of the structure; on the top of this is placed the spine, whose central cavity encloses the spinal marrow, and is continued down the centre of the sacrum in which the holes marked 7 give entrance to small nerves. The side bones (3 3), although in the adult united each in one piece, are in childhood divided into three, and, for convenience of description, anatomists retain these distinctive divisions through life. Here we have a bony structure at once light, compact, and strong, admirably adapted to sustain the weight of the body, and to protect the important organs lodged within its cavity; in the female, this cavity is more broad and ample, and the bones are more extended, to afford sufficient room for the growth of the foetus, and for its safe delivery. It is manifestly of the highest importance that, in women the pelvic bones should be fully developed; in some cases, from disease or other cause, it is not so, and the opening through which the child has to pass, and which is never more than barely large enough for the purpose, is so small as to render its extrication in a living state impossible. A female with a deformed, or imperfectly-developed Pelvis should never enter into the married state, for although she may conceive, she can never bring forth living offspring, and at every forced delivery her own life is put in imminent peril. Although the bones of the Pelvis are very strong, and firmly knit together, yet they are sometimes fractured; this is at all times a very serious accident, for some of the important parts which they inclose are likely to be also injured, the bladder especially. When there is reason to apprehend its occurrence, surgical examination should be instituted as soon as possible, pending which, hot fomentations, poultices, and leeches may be necessary; the body should be placed in an easy position, and a broad flannel bandage sewn round over the hips. The bones of the Pelvis, in common with those of the rest of the body, are sometimes the seat of *Rheumatism* (which see).



part of the human frame, which, it will be seen, is an irregular structure of bone supporting the spine, marked by Fig. 1; this

PEMPHIGUS (Greek *pemphyx*, a bubble). A term applied by Sauvages to vesicular fever, described by some continental physicians under the terms *Febris vesicularis*, *Ampullosa*, or *Bullosa*, the disease belonging to Bateman's order *Bullæ*. A form of this disease prevails among the children in many parts of Ireland, where it is called "white blisters," "burnt holes," and "eating lime."

PENICELLUS (Latin, diminutive of *peniculum* a brush). A term applied to a tent, or pledget of lint or other substance, put into a discharging wound, or ulcer, to keep it open; and also to the secreting extremities of the large trunk vein which extends along the groove of the liver, and is called the *vena portæ*.

PENIS. The male organ of generation; it consists of the corpus cavernosum, the urethra, the corpus spongiosum, which terminates in the glans penis; then there are the vessels, nerves, and a cutaneous investment, which by its prolongation forms the prepuce. See *Generation*.

PENNIFORM (Latin *penna*, a pen, and *forma*, likeness). Penshaped: a term applied to those muscles which have their fibres arranged on each side of the tendon like the webs of a quill, as is the case with the *rectus, femoris, &c.* The Half Penniform Muscles are those which have their fibres arranged on one side of the tendon only, as the *peronæus longus, &c.*

PENNYROYAL, or *Fleamint*, the *Mentha Pulegium* of botanists, of the order *Labiata*,



has a high popular reputation as an emmenagogue, which, however, it scarcely deserves; the odour of its oil is pungent and peculiar, differing somewhat from the other Mints, which it resembles in its properties. See *Peppermint*.

PEPPER. Black, and White Pepper are both the fruit of the *Piper Nigrum*, the latter being the ripe berry deprived of its



skin by soaking it in water, rubbing it off, and then drying the berry in the sun; it is not so pungent as the black Pepper, nor so generally used; but at the tables of the wealthy it is generally preferred on account of its colour. The pepper plant belonging to the natural order *Piperaceæ*, is found in nearly all tropical countries, but chiefly in Java, Sumatra, Borneo, Malacca, and Hindostan. According to the analysis of Pelletier, Pepper contains *piperin*, a very acrid concrete oil, on which the properties of the seeds are supposed to depend; a balsamic gum; a gummy colouring matter; extractive matter, analogous to that of the leguminous plants; gallic and tannic acid; starch; basorin; lignin; and a small quantity of earthy and alkaline salts. *Piperin* is in the form of colourless, transparent crystals, and without taste; it has been recommended as a febrifuge; but really appears to have little or no action on the system. Pepper is well known as a warm, carminative stimulant, it strengthens the stomach, assists digestion, and gives tone to the stomach

when taken moderately, as it is with us; but in warm climates, where its immoderate use seems almost necessary to stimulate the digestive functions to a proper action, it is productive of mischievous results. Medicinally we use Pepper in this country chiefly as a remedy for dyspepsia and flatulence.

Ward's Paste, so celebrated for the cure of chronic piles, is chiefly composed of this spice, which has been given in gonorrhœa in the same manner as cubebs, as well as in intermittent fever, and applied in the form of ointment to ringworm; it is used, too, as a carminative adjunct to other medicines, and the stimulus of a Pepper plaister, has, like one of mustard, proved beneficial in tic doloireux and other neuralgic pains.

Long Pepper (*Piper Longum*) is another member of the family, valued for its medicinal uses, which are much the same as those of the common kind. The Confection of Pepper is given in piles, and debilitated



and sluggish states of the system, in drachm doses; the Oil of Pepper from 1 to 3 drops; Tincture $\frac{1}{2}$ a-drachm to a drachm. Other members of the Pepper family are noticed in this book. See *Cayenne*, *Cubebs*, *Matico*.

PEPPERMINT. A plant of the natural order *Labiata*, botanical name *Mentha Piperacea*, whose well-known peculiarly pungent oil is frequently used medicinally, having carminative and stimulant properties, which render it especially useful in dyspepsia, flatulence, and diarrhœa; the dose of this oil is from 1 to 3, or 4 drops. It may be taken in sugar, or diluted with a little spirit, and then mixed with water, and combined with other medicines. Peppermint water should, by rights, be distilled from the fresh plant, but it is most commonly made by rubbing down the oil with a little lump sugar and a few drops of spirits

of wine, or else with magnesia, and then filtering it; this is most commonly used as a vehicle for other medicines.



PEPSINE (Greek *pepto*, to ripen or digest) Under this name a kind of artificial gastric juice has recently been introduced into medical practice; it is prepared by digesting the cleansed stomachs of sheep, or pigs, in distilled water, treating the resulting liquid with acetate of lead, separating the precipitate thus formed by filtration, then suspending it in water, and passing sulphuretted hydrogen through the water to decompose the lead precipitate. The liquid after being gently heated and filtered, is evaporated to dryness, and mixed with sufficient starch to form a powder, which is the above-named substance. The Prepared Liquor of Pepsine, *Liquor Pepticus Prep.* is sometimes a solution of this powder in distilled water, and sometimes the liquid obtained as above, before it is evaporated to dryness, and mixed with starch. Frequently a little alcohol is added to it for its preservation. The dose of Pepsine is about 1 scruple; of the Prepared Liquor a proportionate quantity. An agreeable means of administering Pepsine when the stomach will bear wine, is by infusing it 6 hours in Madeira Wine, and then filtering. Half an ounce of the Wine should contain a dose of the Pepsine, and is far more agreeable to take than the powder. Whether this substance really supplies a deficiency of the digestive power under which weakly and dyspeptic persons suffer, admits of some doubt although it has undoubtedly proved

beneficial in certain cases of impaired digestion. Dr. Neligan, in the last edition of his *Materia Medica* says:—"This substance can, in my opinion, be regarded in no other light than as an artificial aid to digestion, supplying the deficiency of gastric juice, which exists in some disordered states of the stomach, and therefore should be employed as a palliative only, and not as a medicine. Its properties indicate in what cases it is likely to prove useful; but, like other therapeutic agents, too highly vaunted at first, it is now falling much into disuse."

From the Greek root *pepto*, we have also the term *Peptic*, applied to a substance which is digestible, and *Peptics*, medicines which promote digestion; also *Dyspepsia* (which see),

PER. Is a Latin particle often used in chemistry; it denotes that the substance to which it is applied is in excess of its base of combination; thus a *peroxide* is a compound containing an unusual, or thorough quantity of oxygen; that is, a maximum, as distinguished from a *protoxide*, which has oxygen only in the least degree: the particle *sub* is also sometimes used to signify the minimum degree. *Peracute*, very sharp, is a term applied to diseases when greatly aggravated, or attended inflammation.

PERCUSSION (Latin *percutio*, to strike). The act of striking upon the chest, abdomen, &c., with a view of producing sounds by which the state of the subjacent parts may be ascertained. This is distinguished as—1st. *Direct Percussion*, which consists in striking the surface of the chest, &c., with one, two, or three fingers, and observing the degree and quality of the sounds produced: 2nd. *Mediate Percussion*, which differs from the former, chiefly in the employment of a small plate of ivory, or a piece of caoutchouc, or a finger laid flat upon the surface, on which the percussion is made.

Under the head of *Auscultation*, we have already made some remarks upon this subject, which will enable our readers to understand the general principles of the art. It would answer no good purpose to go more fully into the matter, in a work like this, intended for popular use; as only those well acquainted with anatomy and pathology could successfully conduct an inquiry into the nature and progress of disease by the means indicated. See *Stethoscope*.

PERFORATION (Latin *perforo*, to pierce). A term generally employed to denote a solution of continuity, or separation of parts; it generally occurs from disease of the hollow organs, as the intestines. *Sponta-*

neous Perforation is that which occurs without having been preceded by any perceptible modification of functions, either local or general.

PERICARDIUM (Greek *peri*, around, and *karāia*, the heart). The membrane which surrounds the heart. When it is the seat of inflammation, we term it *Pericarditis*. For symptoms and treatment of this disease, see *Heart*, &c.

PERICHONDRIUM (Greek *peri*, and *chondros*, cartilage). The sinovial membrane which covers cartilage.

PERICRANIUM (Greek *kranion*, the skull). The membrane which covers the bones of the skull, or cranium; in other bones, the corresponding membrane is termed the Periosteum. See *Bones*, *Skull*.

PERINÆUM (Greek *naio*, to flow). The space between the anus and the external parts of the generative organs, so called from being frequently moist. The operation of cutting for stone in males is usually performed here, and here it is, that serious injury sometimes occurs, when persons fall with their legs astride of any object, or get a bruise while in that position, as on horseback; bloody urine, or complete stoppage may be the consequence, arising from inflammation of the bladder, or urethra. Rest and warm fomentations, with leeches, and the use of the catheter, if necessary, must in this case be resorted to; with low diet, aperients, and cooling medicines, to keep down any tendency to fever there may be.

PERIOD. This term is usually applied to the regular intervals between the paroxysms of intermittent fever, and also to certain structural and functional changes, which, as it were, divide animal life into successive stages of development and decay. To the human physiologist, the subject of Periodicity is one full of interest; its more obvious manifestations, such as the regular return of the paroxysms in the quotidian, tertian, and quartan ague; the certain calculable periods that may be assigned to the appearance and decline of the eruptions of measles, scarlet fever, and small pox; and the hectic of the consumptive patient, which is heightened, as are most febrile symptoms, at the close of day; all these are sufficiently obvious to every observer, but there are other signs of the operation of the laws of Periodicity, which are not so obvious as are these, and certain functional changes which occur at particular periods of life, and which well merit minute investigation. A close observance of such phenomena, in conjunction with those of the atmosphere, might probably establish the fact that there is an

intimate connection between the two classes of phenomena, at least as far as relates to those which characterize some of the diseases which affect mankind. This is, however, a subject which would require a wider scope for its full elucidation than we could give it here; even were there sufficient data on which to found a decided opinion. Influenza and other epidemic diseases are no doubt greatly influenced by barometrical variations, and it seems likely that both the electricity of the air, and the magnetism of the earth, have a decided influence on vital phenomena; those of intermittent fever were especially ascribed by Dr. Huxham to the varying pressure of the atmosphere on the veins, and, more recently, Sir D. Barry, took up both his pathological and physiological views.

PERIORBITA (Latin *orbita*, the cavity of the eye). The fibrous membrane which lines the orbit. See *Eye*.

PERIPNEUMONIA (Greek *pneumon*, the lungs). Inflammation of the parenchyma of the *Lungs* (which see), and *Pneumonia*. A form of bronchitis, termed by Dr. Badham, asthenic, is sometimes called *Peripneumonia notha*.

PERISTALTIC (Greek *stello*, to contract). A term applied to the vermicular motion of the intestines. *Peristaltic Persuaders* is a name which Dr. Kitchener gave to his celebrated Dinner Pills: consisting of Rhubarb 2 drachms, Oil of Carraway 10 drops, Syrup 1 drachm, divided into 3 grain pills.

PERISTROMA (Greek *stronnyo*, to spread). Literally, a covering; applied to the mucous or villous coat of the intestines, called by some *Mucosum villosum*; by others, *Crusta membranosa*, or *C. vermicularis*.

PERITONÆUM (Greek *teino*, to extend). The serous membrane which lines the interior of the abdomen, and invests all the viscera contained therein. This is what anatomists would call a closed sac; it contains simply a serous fluid which it secretes, and by which its various duties, and those of the parts invested by it, are facilitated: these parts all lie exterior to its cavity, the outer sides of the membranous sac being folded over them. When there is dropsy of the belly, the water is effused into this cavity: wounds by which the membrane is pierced or divided, are extremely dangerous on account of its liability to inflammation, which, when it takes place here, is termed *Peritonitis*. Puerperal, or Child-bed fever, which sometimes takes place after labour, is called *Peritonæal Fever*, because this membrane is the chief seat of inflammatory

action. See those heads for further information.

PERIZOMA (Greek *peri*, and *zonnymi* a girdle or truss). This term has been applied to the *Diaphragm* (which see).

PERLATE ACID. The name given by Bergman to the acidulous phosphate of soda; the common phosphate had been previously named *Sal mirabile perlatum*.

PERNIO (Greek *perna*, the heel). A term applied to a chilblain, especially if on the heel; it may be either *P. simplex*, in which the cuticle remains unbroken, or *P. exulceratus*, in which there is a broken skin and ulceration. See *Chilblains*.

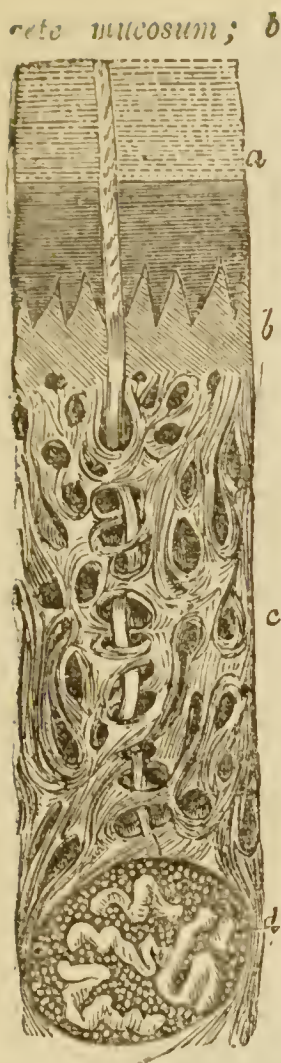
PERONÆUS (Greek *perone*, fibula). The name of three muscles of the leg, viz., the *P. longus*, and the *P. brevis*, both arising from the fibula, and serving as extensors of the leg; and *P. tertius*, which arises from the lower half of the fibula, and is inserted into the metatarsal bone of the little toe; this is the flexor of the leg. The term *Perone* is applied to the fibula, or small bone of the leg, because it is thought to resemble the pin of a brooch. See *Leg*.

PERRY. A fermented liquor made from pears in the same way as cider is from apples; the most hard, austere, and uneatable kinds are used for this purpose; the beverage, when particular care is bestowed on the manufacture, is not inferior to some foreign wines; it is a pleasant, and by no means an unwholesome drink. See *Pear*.

PERSICUS IGNIS (Latin for Persian Fire). A term applied by Avicenna to that species of carbuncle, which is attended with pustules and vesication. See *Carbuncle*.

PERSISTENS FEBRIS (Latin for a Lasting Fever). A regular intermittent; the paroxysms of which return at stated times. See *Fever*.

PERSPIRATION (Latin *perspiro*, to breathe through). This is the watery vapour which is constantly passing off through the pores of the skin; when not, as is commonly the case, in such quantity as to be noticed, it is termed *insensible*; when so profuse as to collect in drops on the surface, it is *sensible Perspiration*, or *Sweat* (which see). The fluid which thus passes off from the system consists chiefly of water, with a small proportion of muriate of soda and free acetic acid; the quantity is at all times very considerable, but is greatly increased during violent exercise, or in hot weather. We give here a cut of one of the glands by which the Perspiration is secreted; it represents a vertical section of the sole of the foot: *a* is the cuticle or scarfskin, the deeper layers of which, dark in colour, being called the



rete mucosum; *b* marks the position of the *papillæ*, *c* the *cutis*, or true skin; and *d* is the sweat gland in a cavity of oily globules. This gland is seen to possess a twisted duct which passes upwards to the surface, and through this tube ascends to the surface the Perspiration, sensible and insensible. It is calculated that there are no less than 28 miles of this tubing on the surface of the human body, and that, on an average, from 2 to 3 pounds of water daily reach the surface through these channels, and is evaporated. For further particulars on this head, see *Skin*.

PERTUSSIS. The name first given by Sydenham to *Hooping Cough* (which see).

Pes (Latin for a foot).

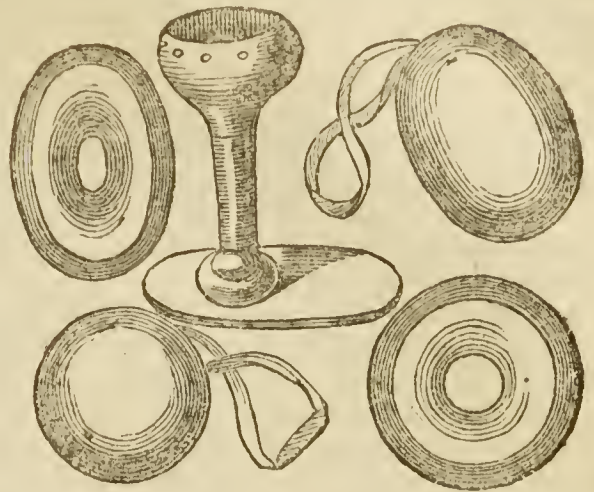
Hence we trace the name of a plexus, the Goose's foot, the name of a plexus of nerves situated on the side of the face; and *Pes hippocampi*, the Seahorse's foot, sometimes called the *Cornu Ammonis*, a part of the brain situated at the posterior prolongation of the fornix. See *Brain*.

PESSARY (Greek *pezzo*, to soften). An instrument made of wood, or other material, formerly employed to keep medicinal substances applied within the pubenda; but now used for preventing prolapsus of the uterus or vagina, or for keeping up a particular kind of rupture.

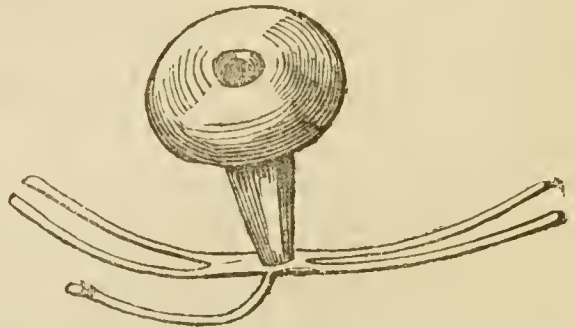
Pessaries are of various forms, in accordance with which they are distinguished as the Bung-shaped, the Conical, the Cup-and-Ball, and the Ring-shaped, &c.; the first is usually employed in vaginal hernia, the second and third in prolapsus uteri, more or less complete, and the fourth in slighter cases of the same. We give representations of the forms generally used; most commonly they are of boxwood, but sometimes, especially the ring-shaped, of a composition of India-rubber called elastic gum.

Sometimes the solid ones are made perfectly spherical, and sometimes the flat

rings are oval in shape; there is also another form called the Mushroom Pessary,



shaped like a cup rising from a stem. A modification of this has been recently introduced by M. Bourgeaud, which appears calculated to support the prolapsed uterus, without creating any irritation of the cervix or vagina, and to allow of the escape of fluids, which the old solid Pessaries would frequently not do. The following cut will give our readers an idea of this instrument,



which is made of Indian-rubber, and distended by inflation, after its introduction into the vagina, to any required extent. Both the channel and stalk of this instrument present a cylindrical canal, which is intended to prevent any accumulation of the normal or abnormal discharges; it is secured on the patient by elastic bands, which are easily fastened to a light narrow belt, running round the lower part of the abdomen; being so elastic and yielding in its nature, it adapts itself better to the shape of the cavity into which it is introduced, and affords the necessary support without undue pressure. A light inflatable ball of India-rubber, with a string instead of a stalk, is also sometimes used; and an instrument of this kind composed of cotton wool has lately engaged the attention of the profession; it is said to be softer, less irritating, and far more cleanly, than the sponge or caoutchouc Pessary, and readily absorbs astringent and other solutions; it is enclosed

in a pyriform net, which is closed by a stout silk thread, which hangs through the vagina, and allows of a ready withdrawal of the Pessary.

PEST, or PESTILENCE (Latin *pestis*, a plague). A term often applied to that destructive form of epidemic disease which in times past committed such fearful ravages in this country and other parts of Europe, and the East, where it is still occasionally prevalent. See *Plague*.

PETECHIA (Italian *petechio*, a flea-bite). A speck or spot on the skin, which resembles that caused by the bite of a flea. Various authors have applied this term to Land, or, as it is sometimes called, Petechial Scurvy, a form of purpura, scientifically termed *Petechiæ sine febre*, or *Hæmorrhæa petechialis*. See *Scurvy*.

PETROLEUM (Greek *petros*, a rock, and *elaion*, oil). A bituminous fluid, which flows out of the fissures of rocks; it is commonly called *Barbadoes Tar*. From the same root we have the name applied to the rough portion of the temporal bone, *Petrosum os*.

PEYER'S GLANDS. The clustered glands of the intestines, or agminatæ, so called from their discoverer, Peyer.

PHACIA (Greek *phakia*, a lentil seed. This is the ancient term for lentigo, or *Freckles* (which see).

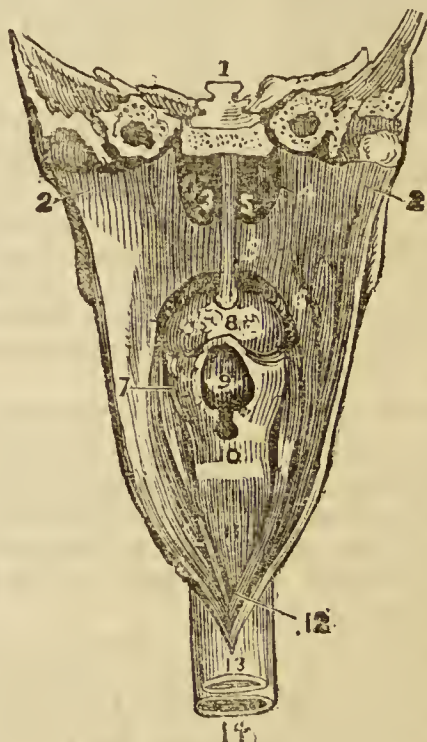
PHAGEDÆNA (Greek *phago*, to eat). An ulcer which spreads, and, as it were, eats away the flesh: hence the general term *phagedænic*, applied by surgeons not only to destructive ulceration, but also to medicines or applications which cause the absorption or sloughing of fungous growths. *Phagedænic Water* is made from Quick Lime and Corrosive Sublimate, and is therefore a compound of Chloride of Calcium and Red Oxide of Mercury; it is sometimes applied to foul ulcers and fungous tumours.

PHALANX (Greek for an army.) Applied to the bones of the fingers and toes, on account of their regularity of form and arrangement; the plural is *Phalanges*.

PHARMACOPŒIA (Greek *pharmakon*, a poison, or a medicine, and *poieo*, to make). Originally applied to the process of making or preparing medicines: now used to denote the dispensatory, or standard code in which the various medical preparations are described, and their doses specified. The colleges of London, Edinburgh, and Dublin have each a distinct Pharmacopœia, differing considerably in many of the formula. Hence it is usual, in prescribing, to affix E or D, after the tincture or other preparation, should the prescriber intend it to be

different from the London form. We speak of these authorized forms of medicine as *Pharmaceutical preparations*, and of that branch of medicine which consists in compounding as *Pharmaceutics*; while *Pharmacology* is a description of the method of compounding and administering medicines. He therefore is a *Pharmacologist* who is skilled in, or writes on, drugs and medical compounds; and *Pharmacy*, in its most extensive sense, is the art or practice of collecting, preparing, preserving, compounding, and combining medicines, and dispensing them according to the formula or prescriptions of medical practitioners; or, in a more narrow sense, it may signify merely the compounding and mixing of drugs according to prescriptions, or as we commonly say, *Dispensing*.

PHARYNX (Greek for the throat, from *phegein*, to convey). The muscular, funnel-shaped bag, situated at the back part of the mouth, which receives the masticated food, and conveys it to the œsophagus, in which it terminates. The following cut, from Wilson, will give our readers some idea of its structure and position.



We here see the Pharynx laid open from behind; fig. 1 commencing the section which is carried transversely through the base of the skull; 2 2 are the walls of the Pharynx drawn aside; 3 3 are the posterior nares separated by the vomer (see *Nose*); 4 is the extremity of one of the eustachian tubes; 5 is the soft palate, of which 6 is the posterior pillar, 7 being the anterior pillar; in the niche between the two is seen the tonsil; 8

is the root of the tongue, partly concealed by the uvula, 9 is the epiglottis which overhangs (10) the cordiform opening of the larynx, of which 11 is the posterior part; 12 is the opening of the œsophagus, the continuation of which is marked by 13, while 14 indicates the position of the *Trachea* (which see).

Thus we see that the Pharynx and Œsophagus, which form the continuous tube, or canal, by which food is conveyed into the stomach, are directly behind the larynx and trachea; these latter being the passages by which air is conveyed to and from the lungs, and by means of which vocal sounds are uttered. *Pharyngitis* is inflammation of the Pharynx; *Pharyngotomy* is the operation of cutting into the Pharynx for the purpose of extracting any foreign body; and *Pharyngotomus* is the instrument by which this is accomplished.

PHIMOSIS (Greek *phimos* a muzzle). An affection of the prepuce which prevents its being drawn back so as to uncover the glans penis. See *Paraphimosis*.

PHLEBITIS (Greek *phleps* a vein). Inflammation of the veins; it is distinguished by a hard, cord-like, tender line, pursuing the course of a vein or veins, commencing generally at a bruise, cut, or some other injury; it may be suppurative and diffused, running into abscesses, and attended with typhoid fever; or suppurative and adhesive, with distinct abscess in the course of the inflamed vein, and protracted fever. From the same root *phleps*, or *phleps* with *tome* section, comes *Phlebotomy*, that is *Venesection*, or opening a vein. See *Bleeding*.

PHLEBOLITES. Among the great number of cases of enlarged and tortuous veins it is not unusual to meet with Phlebolites, or Vein Stones, as they are often called; they are large, and generally oval substances, which are found in the tortuosities of the veins, and are composed principally of phosphate and carbonate of lime, with some animal matter. Sometimes they cause great inconvenience, and have to be removed. Their usual situation is on the saphenous vein, which is the most prominent of any in the leg, and are always connected with varicose enlargement; the smaller vessels in various parts of the body, however, when diseased, generally contain them.

PHLEGM (Greek *phlegma* from *phlego* to burn). This word originally meant matter which resulted from suppuration or destruction of animal tissue; according to the ancients, it was one of the four humours of which the blood was supposed to be composed. We now understand it to mean

bronchial *Mucus* (which see), or the thick viscid matter secreted in the throat, and discharged by coughing; chemists sometimes apply it to the water of distillation, and physiologists to temper or temperament, thus a dull, cold, sluggish, indifferent, person is said to be *phlegmatic* or *phlegmatical*, or to act *phlegmatically*, that is coldly, heavily.

PHLEGMAGOGUES was the ancient name of purgatives which produced glairy evacuations, from excitement of the mucous membrane, and *Phlegmorrhagia* was profuse secretion of mucus.

Phlegmon is the term often applied to healthy inflammation; and *Phlegmonous* is a term generally used in connection with erysipelas, which affects the cellular tissue beneath the skin.

PHLEGMASIE (from the Greek *phlegma*) is a term applied by Cullen and others to local inflammations; thus we have *Phlegmasia dolens*, Puerperal tumid leg, an affection depending upon inflammation of the iliac and femoral veins. Dr. Cullen termed this *anasarea serosa*, and Dr. Lee *erural phlebitis*.

PHLOGISTON. (Greek *phlogo*, to burn). A name given by Stahl to an imaginary substance which was supposed to be the principle of inflammability. The theory was, that combustible bodies consisted of an incombustible base united to this Phlogiston, which escaped in the act of burning. We now attribute the process to the union of certain known substances, of which oxygen is the chief; and we call these supporters of combustion Phlogosis (to inflame), the term applied to an inflammation or flushing. To local inflammation Dr. Good applied the term *phlogotica*.

PHLORIDZINE. A substance discovered by Dr Kormick in the fresh bark of the root of the apple, pear, cherry, and plum tree; it appears to be very similar to *Salacine*, is acted on by dilute acids, exactly like that substance, and like it has been used with success in intermittents.

PHLYCTÆNA (Greek *phlyktaina*, a vessel; from *phlyko*, to be full or hot) a vesicle containing ichorous fluid. The diminutive of the term Phlyctæna, *phlyctenula*, is applied to a watery vesicle of the ciliary margin. See *Eyelids*. From *phlyko* comes also *Phlysis*, a term formerly used to denote a cutaneous eruption filled with any kind of fluid, generally ichorous or vesicular pimples; but this term is seldom now used; nor is *phlyzacium*, a pustule, commonly of a large size, raised on a hard circular base, of a vivid red colour, and succeeded by a

thick, hard, dark-coloured scab. See *Skin Disease*.

PHOCENINE. A peculiar fatty matter obtained from the *Delphinium phocaena*, or Porpoise; it yields, on saponification, a volatile odoriferous acid, called Phocenic acid.

PHOSGENE GAS. (Greek *phos* light, and *gennao*, to produce). A compound of chlorine and protoxide of charcoal, sometimes called Chloro-carbonous acid.

PHOSPHATE. (Latin *phosphas*). A salt formed by the union of phosphoric acid with an earthy or mineral base; thus we have Phosphates of barytes, lime, potash, soda, &c. Many of the metallic oxides which are met with in nature, are properly Phosphates. The Phosphate of lime, which is the base of the bones of all animals, is sometimes used medicinally, and is alluded to in all medical works under the name of *cornu ustum*, burnt bones. The old tasteless Purging Salts, prepared from bones and carbonate of soda, is properly Phosphate of soda; it exists in the urine combined with ammonia, and in this combination has been called fusible or microcosmic salt.

PHOSPHORUS (Greek *phos*, and *phero* to bring). It is a substance which was originally prepared from urine, but is now made from bones. It is highly inflammable and luminous, burning, when exposed to a common temperature with a slow combustion, and diffusing a very peculiar lustre, which has been called *Phosphorescence*. It is present, to a greater or less extent, in all decayed animal, and in most vegetable and mineral matter, which hence becomes luminous; and it is the phosphorescent light which is emitted from the minute jelly-fish and animalculæ of the deep, making the ocean waves flash and shimmer like living flame. The chief present economic use of Phosphorus is in the manufacture of lucifer matches, and its consumption for this purpose must be enormous; it is a strong poison, being of all stimulants the most powerful and diffusible; if given, as it sometimes is, to rouse the vital powers in typhoid fever, the latter stages of phthisis, or exhaustion from any chronic disease, it should be with great caution, and never in substance by itself on account of its corrosive nature. The dose is from 1-10th to 1-20th of a grain dissolved in Ether, with a drop of some aromatic oil. It has been recommended for gout and rheumatism, and is employed externally as the chief stimulating ingredient in liniments, for paralyzed limbs, and other parts. For this purpose it could be dissolved in Olive Oil, in the proportion of 20 grains to 2 ounces, with 20

grains of Camphor, and 1 drachm of the strong Liquor of Ammonia. Dr. Copeland recommends it to be taken in paralysis, in combination with Oil of Amber, dissolving 1 grain in 1 ounce of the oil, and taking 10 drops three times a-day in cold water. The constant inhalation of Phosphoric vapour by those employed in lucifer-match factories is found to have a very injurious effect upon the health, frequently giving rise to a peculiar form of disease whose seat is chiefly on the lower jaw, portions of which become necrosed, or dead, causing abscesses and ulcerations. Sometimes the diseased portions of bone have to be removed by the surgeon, and cases have occurred in which nearly the whole of the jaw has been lost. It has been stated that if saucers filled with Turpentine are distributed about the workrooms, they will, by absorbing the Phosphoric vapours, to a great extent obviate this danger; but cleanliness and free ventilation are the best safeguards. Recently it has been found that if ordinary Phosphorus is melted in a peculiarly constructed retort, and kept for some hours at a temperature of about 500 deg. Fahr. it becomes, as it were, latent, so that it ceases to give out any vapour, and is so incombustible that it may be handled and even swallowed with impunity. This, which is termed Amorphous Phosphorus, is likely to come into general use; so that if children take a fancy for sucking lucifer matches, they may do so without being poisoned, and people may work in the factories without losing their lower jaws; or if they be pregnant women, of miscarrying, as it has been ascertained by a scientific Frenchman they are very likely to do under the influence of Phosphoric emanations, which the same authority asserts are great excitants of the sexual organs in men.

The ground bones and other phosphates which cultivators find so beneficial to their lands serve but to supply the waste of Phosphorus occasioned by the growth of plants, and especially the greens used chiefly by man as food. A compensation for this waste might be found in the sewage of our large towns and cities, which contains Phosphorus in abundance; if this were properly preserved and distributed there would be no need for guano and other foreign manures.

There are several chemical combinations into which this substance enters, such as *Phosphalic Acid*, an acid obtained by the slow combustion of cylinders of Phosphorus in the air; *Phosphoric Acid*, a compound of Phosphorus and oxygen; *Phosphurets*, which are compounds of Phosphorus with

combustible or metallic oxides; and *Phosphates*, which are salts of the Phosphoric acid. There are some preparations to which the term is wrongly applied, such as the Phosphorus of Baldwin, of Canton, and of Bologna, the first being the Ignited Muriate of Lime; the second, Oyster-shells calcined with Sulphur; and the third the Sulphate of Barytes.

PHOTOMETER (Greek *phos*, and *metron*, a measure). An instrument for measuring the different intensities of light. The most simple and generally approved is that invented by Sir John Leslie, being merely his differential thermometer, having one of the balls diaphanous, and the other coated with China ink or dark enamel. The light passes through the clear ball, but is absorbed, or rather the heat is, by the black one; this heat causes the air in the ball to expand, so that it forces down the liquid on the stem attached to it, and the space which this sinks measures the intensity of the *Light* (which see).

From the same Greek root *phos*, we have also *Photophobia*, Intolerance of light, a symptom of amaurosis; and *Photopsia*, Luminous vision, which is sometimes called *Visus Lucidus*. This is also a symptom of *Amaurosis* (which see).

PHRENITIS (Greek *phrenes*, from *phren*, the mind). A term formerly applied to the diaphragm, because it was supposed to be the seat of the soul. From the same root comes also *Phrenzy*, a disorder of the brain. See *Madness*.

PHRENOLOGY (Greek *phrenos*, and *logos*, an account). Literally a description of the mind; applied by Gall and Spurzheim to a new doctrine of mental philosophy, founded on a presumed knowledge of the functions of different portions of the brain, which, by their peculiar developments, modified the form of the head, so as to make it an indication of character. According to this theory, the head may be regularly mapped out, and the mental peculiarities of the individual at once determined by a comparison of its different parts. Dr. Combe, who followed Spurzheim, and is considered in this country the most eminent authority on the subject, divides our faculties into three classes—The intellectual or perceptive; the sentiments and emotions; and the animal propensities. The front part of the head is assigned to the first of these; the middle and upper parts to the second; and the hinder part, including the cerebellum, to the third. Each of these divisions is subdivided into minute parts, which are supposed to cover special organs assigned to distinct faculties or feelings.

Much stress has been laid upon the advantages to be derived from Phrenology as a basis for a system of medical psychology. If, as has been asserted, we can ascertain by certain cranial developments, the faculties and feelings, and can, by a proper course of treatment, repress the growth of such as are of a bad tendency, and encourage that of those of an opposite nature, we shall be able to do much towards producing a perfect character; and, as a sound mind will go far to produce a sound body, we shall thus also greatly conduce to a good state of physical health. But we do not find that this beautiful theory (for such it certainly is) can be brought into practice, without disappointing the expectations of those who have built upon it hopes of ameliorating the condition of their fellow creatures. Hence its utility, at all events, in the present state of the science, if we may so call it, is very questionable, either as a guide for educating the healthy mind, or for remedying its diseased condition.

PHRYGANEAE GRANDIS. The scientific name of the Caddis Fly, the larvæ of which are said to have been found in the human intestines.

PHTHISIS (Greek *phthio* to consume, or corrupt). A disease, produced by tubercles on the lungs, called *Consumption* (which see). The Greek pathologists generally treated this disease under two heads *Phthisis* and *Phthoe*, the former being abscess, and the latter, ulceration of the Lungs. *Phthisic* is a term sometimes improperly applied to any difficulty of breathing, more especially to chronic dyspnoea under the mistaken impression that it is the result of Phthisis; so also we sometimes hear *Phthisical* applied to a wasting of the flesh.

PHYMA (Greek from *phio*, to produce). An imperfectly suppurating tumour forming an abscess, often with a core in the centre; this is the name of a genus of the *tubercula* of Bateman which includes boils, carbuncles, &c.

PHYSCONIA (Greek *physao* to inflate). Inflation of the bowels; called by Hippocrates *Megalo-splanchnus*, or big bowel: for this and visceral turgescence generally, Dr. Good uses the term *Parabysma*; it is usually occasioned by a morbid state of the liver or spleen.

PHYSETER MACROCEPHALUS (Greek *makros* great, and *kephale* head). The scientific name of the spermaceti whale, characterized by its enormous head, from which is obtained *Spermaceti* (which see).

PHYSIC. This term is generally applied, 1st, to the art of healing diseases, or, as

we now say, the science of *Medicine* (which see); 2nd to medicines, or remedies for diseases; 3rd, in popular language, to a medicine that purges, a *Cathartic* (which see). Thus *Physic* in the active sense is, to treat with medicine, to cure, or to purge. *Physianthropy* is the doctrine of the constitutions and diseases of man; and may be termed the Philosophy of Human Life.

PHYSICS (Greek *physis*, nature). This is the science of nature, or of natural subjects, comprehending in its widest sence the study or knowledge of whatever exists in the material world; in its more restricted sence it is applied to one of the three divisions of natural science, these three being:—*Physics*, or natural philosophy, which has relation to the general properties of bodies, their mutual actions on each other, their causes, effects, laws, &c.; *Chemistry*, which studies the peculiar properties of bodies, their elementary principles and combinations; *Natural History*, which observes their external characters and appearances, classifies and arranges them.

PHYSICIAN is one who professes the art of healing; he belongs to the first class of medical practitioners in social rank and legal position; he puts M. D. after his name, and calls himself a Doctor of Medicine, the first term signifying learned from the Latin *doctus*, and the last coming from *medico* to cure. If he has not taken out his degree at one of the Scotch, Irish, or other universities, he is a member of the London Royal College of Physicians, whose foundation dates from 1518, letters patent, therefore having been obtained from Henry VIII, through the instrumentality of Cardinal Wolsey. The examining board of this college grants diplomas to those, who, according to their regulations, are legally qualified to pratice as Physicians, who confine themselves generally to the prescribing of medicines, which are prepared by the apothecary, or druggist, the prescriber having a certain fee for his attendance. In difficult and dangerous cases the Physician is frequently called in to consult with the family surgeon. *Doctor* is a name very commonly applied to all medical practitioners, and many of those who practice as surgeons and apothecaries are really entitled to it, having obtained diplomas from some college or university.

PHYSIOGNOMY (Greek *physis* and *ginosko* to judge of). The study of general character, or of diseased states from the features and cast of the countenance. Efforts have been made by Lavater and others to raise this study to the rank of a science, but with-

out success; undoubtedly the countenance will, to a certain extent, indicate character, as the general shape of the head will afford some confirmation of the theory of phrenology; but there are so many modifying influences, that it is never safe to predicate by any of these outward and visible signs what the mental or moral man may be. Of his state of health we may commonly judge pretty well by the condition and expression of the *Countenance* (which see) and *Face*.

PHYSIOLOGY means that branch of medical science which treats of the functions of the human body, as *anatomy* treats of its structure. Thus, a *Physiologist* is one who has to do with the science of things generated or alive—with the doctrine of vital phenomena; he may study animal or vegetable Physiology, but it is with the former that the medical man is most concerned, and especially in its relation to the internal economy of man, that is, *Human Physiology*.

PHYSOMETRA (Greek *physaio*, to inflate, and *metra*, the uterus). An inflated condition of the *Uterus* (which see).

PIA MATER (Latin for Pious Mother). The innermost membrane of the *Brain* (which see).

PIAN (a Raspberry). The name given on the American coast to *Yaws* (which see), and *Frambæsia*.

PICA (Latin for a Magpie). Sometimes applied to depraved appetite, or a craving for improper substances. See *Malacia*.

PICKLES. Vegetable substances prepared in vinegar are universally taken as a relish with cold meats. Nothing can be said against the practice, provided the Pickles are properly prepared, and but a small quantity be eaten at the time; they are somewhat indigestible, it is true, yet not so much so as to cause inconvenience or mischief. Unfortunately, as the investigations of the *Lancet Sanitary Commission* have shown, the Pickles prepared in a large way for shop sale, have commonly more or less of copper in them, and this is especially the case with the green kinds, such as gherkins, beans, &c. This adulteration may be easily detected thus:—Take a perfectly clean and bright piece of Iron, immerse it for several hours in the vinegar of the Pickle; if copper be present, a dim crust of it will be deposited on the iron. Or it may be done in this way:—On the blade of a Knife made perfectly clean put 3 or 4 drops of the vinegar, and 1 drop of Sulphuric Acid, then hold the under surface of the knife over the flame of a candle, until the liquid is evaporated; the copper, if there be any, will

be deposited on the iron. From the above authorities, we learn also that the vinegar of Pickles is adulterated with sulphuric acid (for the mode of detecting which adulteration see *Vinegar*.)

On the whole, it is best for Pickles to be home-made; every housewife will know the process, or can easily learn it by consulting *The Wife's Book of Cookery*, or some domestic manual of the kind.

PICROMEL (Greek *pikros*, bitter, and *mele*, honey). Literally, bitter sweet; the characteristic principle of *Bile* (which see).

PICROTOXIA (Greek *pikros*, and *toxos*, poison). The bitter and poisonous principle of *Cocculus Indicus* (which see).

PIGMENTUM NIGRUM (Latin for Black Paint). A dark brown substance which covers the outer and inner surface of the choroid membrane. (See *Skin*.) The absence of this it is which gives the red colour to the iris and the pupil in Albinos.

PILARE MALUM (Latin for bad hair) morbid organization, or deficiency of hair. See *Trichiasis*.

PILES. The troublesome disease so called consists of tumours situated on the verge of the anus, or fundament, which tumours are formed by the distension of the veins at the extremity of the rectum, or lower bowel; they are usually about the size of a bean, sometimes much larger, and are caused by the distension of the veins with congested blood. When there is an action of the bowels they are forced down, and if there is much constipation and straining, or much exertion necessary, so as to irritate and inflame the parts, they are likely to be greatly distended, so that they cannot be pressed back again; in this case they become very large and painful, and eventually perhaps burst, to the great relief of the patient; or they may run into abscesses, and, it may be, lay the foundation of a fistula.

Piles may be either "blind" or "bleeding;" the latter is the case when the veins within the bowels become much swollen, of a red colour, and uneven surface, having their walls so thin that the slightest effort to relieve the bowels causes them to bleed freely: the former is when the swellings become filled with a fibrinous deposit from the blood, so that they form tumours and excrescences outside the anus; sometimes these, although inconvenient, are not very troublesome otherwise; if the cause which produced them be removed, they will be likely to remain quiescent for a time; but strong purgative medicines, a cold, or too much exertion, may stimulate them into activity, then they become inflamed and

very painful; then we have what is called "A Fit of the Piles." Persons with torpid livers, or with whom the venous circulation is sluggish, are those most subjected to Piles, which are no doubt the result of passive congestion of the veins about the rectum; but it will usually be found that the disease will not become fully developed, unless there is also habitual constipation. The *treatment* should therefore be both local and general; the first directed to remove all obstacles to the proper action of the liver, and to cleanse the large bowels of matters which may press upon the veins, and impede the return of the blood from the lowest bowel, which is the seat of the disease; to this end we should give mild aperients, combined with alteratives, beginning with pills like these: Rhubarb 1 drachm, Ipecacuanha $\frac{1}{2}$ a drachm, Blue Pill 1 scruple, make into 24 pills, and take 2 every night until the motions become soft and sufficiently frequent, then 1 every other night. A stimulant will also be required, and Confection of Black Pepper is perhaps the best; or Ward's Paste, which is composed of Sulphur, Copaiba, Balsam, and Spices; about a teaspoonful of the former, or from 10 to 15 grains of the latter, may be taken night and morning; should the bowels not be moved sufficiently by these means, take Confection of Senna, commonly called Lenative Electuary, 3 ounces, Sulphur 1 ounce, Jalap and Cream of Tartar, of each 2 drachms, and Ginger 1 drachm, with Syrup enough to make it up into a soft Electuary; dose, a teaspoonful twice a day, or only every night, if too active.

The *local* treatment consists in injecting 2 or 3 ounces of Cold Water into the bowel just before the passing of a motion; this partly empties, and contracts the distended veins, and facilitates the passage of the fæces. Care should also be taken to press back within the sphincter ani, or muscular ring which guards the entrance of the bowel from the anus, every Pile which protrudes, as if suffered to remain outside, it will, by the pressure of the above muscle, become strangulated and inflamed. When the Piles are in this latter condition, they should be fomented with hot water by means of a sponge every four hours or so, and the recumbent position should be maintained as much as possible; leeches, also, may be applied to them, with a linseed poultice to encourage the bleeding. If there is inflammation of Piles within the sphincter ani, make an injection thus:—Dissolve in 8 ounces of Boiling Water, Acetate of Lead and Opium, of each $\frac{1}{2}$ a drachm, and of this lo-

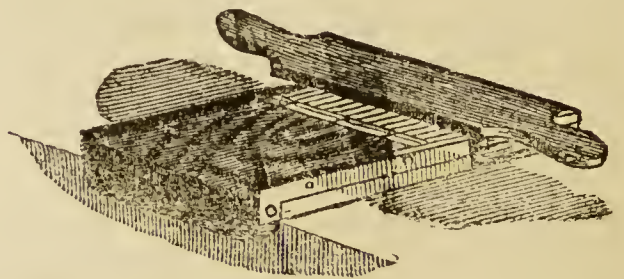
tion, when cool, throw up into the bowel with a small syringe just $\frac{1}{2}$ an ounce, by measure, after a motion, but not more than twice in the 24 hours; only in cases where the bleeding is profuse should this powerful application be used. For internal Piles, also, leeches may be employed with advantage; they can be applied externally, and followed by warm fomentations, or a hip-bath. When Piles first show themselves, before there is much inflammation, or after this has subsided, an astringent ointment should be applied with the finger, as far as it can be thrust, night and morning; the Compound Gall Ointment is best for the purpose; or one prepared thus: Gallic Acid, 1 drachm; Powdered Opium, $\frac{1}{2}$ a drachm; Goulard's Extract, 10 drops; Lard, 1 ounce.

Piles can only be entirely removed by means of the knife or ligature; the former is an operation which only a surgeon should attempt, as the hæmorrhage is often excessive. The latter may be managed by a non-professional person, provided there is an urgent necessity for it. The method is this: pass a needle, armed with a double silk, well waxed, or a very fine metallic wire, through the Pile, close to its base, cut the silk or wire so as to release the needle and leave four ends; tie each two of these tightly together, so that they enclose the two halves of the Pile, which then becomes tinged with blood, and may be pricked with a lancet, or other sharp instrument, and emptied by a little pressure; another stronger ligature should also be passed round above these, which secure the two halves, and tied very firmly, and then the ends of all the threads can be cut off, and a warm poultice applied to soothe and allay irritation. It is of the utmost importance to the success of this operation that the second larger ligature should be tied very tightly, so as completely to stop the circulation of blood into the Pile, which, if this is properly effected, will in three or four days slough off, and leave merely ulcers that will heal in the usual way. An injection of Sulphate of Iron, of from 2 grains to an ounce of water, thrown up every morning has been found serviceable.

Piles are scientifically called *hæmorrhoids*, which signifies a flowing of blood: persons who sit much are most subject to them. They frequently cause the greatest agony, as though (as a patient has described it to us) a red-hot poker were thrust into the bowels. The greatest care should be taken by persons so affected to prevent the accumulation of fæces in the lower bowels, and to avoid purgatives of a violent forcing

nature; gentle aperients, with aromatics, such as those above-named, and a light but sufficiently nutritive diet; exercise, when it can be taken, and tonics when there is no active inflammation, should be the course adopted.

PILLS. This is a very convenient form of administering medicines, especially such as are very active in their properties, and nauseous in flavour, as they can be swallowed without tasting. To prepare them it is only necessary to rub down the ingredients into a finely pulverized state, and add sufficient of some tenacious liquid to form a homogenous mass, which can be easily divided, and rolled into Pills. To effect this a pestle and mortar is required; it should be of metal, as the mass generally requires beating, to assimilate the ingredients properly; a short stout spatula, or palette knife; and a slab of marble or glazed porcelain—if marked with divisions, it is so much the more convenient, as Pill machines are expensive, and scarcely necessary in domestic practice. We give a cut of one of these useful articles, that our readers may see the advantages it possesses over the simple method of rolling out the mass, and dividing it with the knife into a certain number of portions, which have to be rounded with the fingers.



By means of this machine, the cutting and rolling is done at once, and an exact division of the mass into Pills ensured. The machines are generally made to cut and roll 24 Pills, and the sizes for which they are intended, range from 3 to 5 grains; the former is the most convenient for swallowing, and it is better to take two of such than one large Pill, which is likely to stick in the throat, and to remain for a long time undissolved when it is down. Generally speaking, a sufficient quantity of active ingredients is required to make them of a moderate size; but sometimes it is desirable to administer very powerful medicines, such as Calomel, Morphine, &c., in this way, and then it is usual to give bulk and consistence by the addition of such comparatively inert substances as Bread-crumbs, Castile Soap, Soft Extract of

Liquorice, or **Conserve of Roses**. When Bread is used, it should be quite stale, so that it will rub down into a powder, and amalgamate with the other ingredients. Pills made with Bread and Mucilage are apt to become very hard, and are therefore only fit for present use. Pills made with Treacle or Conserve remain soft as long as any. If Hard Soap is used, it should be scraped into the mortar first, and rubbed into a powder, Soft Soap is better than Hard, but Glycerine—better still—has latterly been much employed. For Pill-mass intended to be kept for a time, a few drops of Olive or other fixed oil is sometimes added to prevent the mass hardening. If resinous gums, such as Scammony, enter into the composition of the Pills, the necessary moisture may be Spirit of Wine, which, by dissolving a portion of the resin, will give cohesion to the compound substance; but this is apt to get hard after awhile. It is best to keep Pills in stoppered bottles; if much exposed to the air they soon harden, and become, to a certain extent, inert, because insoluble. If kept in pots, they should be closely covered; boxes are the worst possible receptacles for them. Some persons can take Pills very easily; others only with great difficulty; and some few not at all. The best method is to hold the head back, take the Pill between the finger and thumb, and passing these as far into the throat as possible, drop it into the pharynx, swallowing immediately some water, or other liquid, to carry it down. As a rule, the best time for taking Pills is bed-time; when the body is quiescent their operation is less interfered with. Of course, there are many cases which require their administration at all times and seasons. Owing to their compactness and portability, there is no form of medical preparation so convenient as this.

There are upwards of 30 forms for Pills given in the Pharmacopœias of London, Edinburgh, and Dublin, but the following are all that is necessary or desirable to keep for family use:—

Compound Rhubarb Pill, a mild and safe aperient, is made thus: Take of Rhubarb, Aloes, and Myrrh, all in powder, of the first 4, of the second 3, of the third 2 drachms; Hard Soap scraped, $\frac{1}{2}$ a drachm; Treacle sufficient to form a mass; about $\frac{1}{2}$ a drachm of Oil of Carraway is sometimes added, to render it more carminative. Dose, from 3 to 12 grains. It may be kept in powder, and made up with Treacle or Mucilage when required; and, if for use in a hot climate, this plan is best.

Compound Colocynth Pill. An active

aperient; perhaps more extensively used in this country than any other purgative, under the name of *Pil Cociae*, which is, or should be, made thus: Take of Aloes and Scammony, in powder, each 8 drachms; Colocynth, Ginger, and Sulphate of Potash, each 1 drachm; Rectified Spirit, sufficient to form a mass; 1 drachm of Oil of Cloves is a useful addition to prevent griping.

Compound Gamboge Pill. A very active aperient, useful for those who require powerful medicine. Take of Aloes and Gamboge, each 3 drachms; Ginger, 1 drachm; Soap, 4 drachms; Rectified Spirit, a sufficient quantity. Dose, of both these, same as the Rhubarb. Oil of Peppermint or Cloves may be added to prevent griping; and, if required yet more active, $\frac{1}{2}$ a drop of Croton Oil to each 3 grain Pill.

Mercurial or Blue Pill, and *Plummer's Pill* should be obtained from the druggist ready made, as they cannot well be prepared at home; they will keep good in the mass, or divided into Pills, for a length of time. The first must be resorted to in all those numerous cases of stomach and head disorders which arise from biliary derangements. The dose is from 3 to 5 grains; it may be given with either of the aperient Pills, or by itself at bed time, followed in the morning with a Black Draught, or other saline aperient. The Plummer's Pill is the best alterative known; it must be given carefully, as it contains Calomel.

Compound Galbanum Pill. Antispasmodic and emmenagogue. Useful in hysteria and amenorrhœa. Made of Galbanum, Myrrh, Sagapenum, Assafoetida, Soft Soap, and Treacle; cannot well be prepared at home. Dose, from 10 to 15 grains.

Pill of Iron with Myrrh. Stomachic, tonic, and emmenagogue. Useful in dyspepsia, chlorosis, hysteria, &c. Made of Myrrh, Sulphate of Iron, Carbonate of Soda, and Treacle, 2 drachms of the first, and 1 I drachm of each of the three last.

Expectorant, or Cough Pills. (See formulæ under the head *Cough*). To such of our readers as will take the trouble to acquaint themselves, by a perusal of this book, with the nature of diseases and properties of drugs, many other useful Pill combinations will be suggested. It would be quite useless for us to fill our space with a multitude of formula which may perhaps never be required. We may, however, add to the list one more form, which is of very general acceptance, and has long been known as

Pill Rufi. It is the Pill of Aloes with Myrrh; a good stimulant cathartic; consisting of Aloes, 4 drachms; Myrrh, Saf-

fron, and Soft Soap, of each 2 drachms; Treacle, sufficient quantity. Dose, 10 to 20 grains. Good in obstinate constipation, but to be avoided in piles or uterine diseases.

PIMENTO. See *Allspice*.

PIMPERNEL. This is the *Anagallis Arvensis* of botanists, of the natural order *Primulaceæ*; a common native plant well known as the Poor Man's Weather Glass, and Shepherd's Barometer, names suggested by the regular closing of the flowers at



noon, or on the approach of rain. This plant has been recommended for epilepsy, hydrophobia, and paralysis, but of its real properties little is known; if used at all, it should be with great caution; sheep will not eat the leaves and stalks, and the seed is said to destroy birds.

PIMPLE. Any small elevation of the cuticle, generally with an inflamed base. Under the head of Pimples are included several kinds of eruptions of the skin, which may be elassed under two divisions *Watery* and *Matterly*: in the first division we have Eczema or Humid Tetter; Herpes, of which Shingles is a variety; Rupia; and Pemphigus. In the second division is Impetigo or Yellow-crusted Tetter; and Ecthyma, or Black-crusted Tetter. See these heads and *Skin Diseases*.

PINEAL GLAND (Latin *pinæus*, pine). A gland of the brain, situated above the tubercula quadrangemina and said to resemble a pine-apple in shape. The calculi of this gland, which Dr. Wollaston proved to be

Phosphate of Lime, are called *Pineal Concretions*. According to the theory of Descartes, this gland, which is about the size of a pea, is the seat of the soul, mind, or spirit, whatever it may be called; that mysterious principle of vitality and sentient thought which has hitherto eluded all the researches of human philosophy, and, no doubt, will continue to elude them. That breath of life "Which in the beginning God breathed into man," is not a thing to be weighed and measured by our finite faculties; its seat is everywhere and nowhere; it is and is not; its presence is life, its absence death.

PINE APPLE. This is the fruit of the *Ananassa Sativa*, a native of South America, where it is called *Nana* or *Nania*: it is now cultivated extensively in the West Indies as an article of export, as well as of home consumption, and also, where the climate renders artificial heat necessary, in hothouses. The plant belongs to the natural order *Bromelilaceæ*. There are several



species or varieties of this plant, whose delicious fruit could only, until recently, be enjoyed by the wealthy; but now the rapidity of communication between distant parts has very much cheapened the article, so that "Pine Apple, a penny a slice" has become one of the cries of our large cities; not often, however, is the fruit thus vended sufficiently fresh, and when it is, we must pronounce it somewhat unwholesome.

Before it is perfectly ripe, the fruit of the Pine Apple is almost caustic, and its use then is attended with danger; it is some-

times employed medicinally in the West Indies as a remedy for intestinal worms, and to promote the secretion of urine.

PIN-EYE. A variety of Synizesis, or Contracted Pupil, so called because the contraction sometimes reduces the pupil to the size of a pin's head.

PINGUECULA (Latin *pinguis*, fat). An affection of the eye occurring in elderly persons, and consisting of narrow granules towards the angle of the eye under the conjunctiva; it is sometimes called *Pterygium* (which see).

PINIC ACID. An acid obtained from turpentine, which is an exudation from several species of pine.

PINS AND NEEDLES. A popular name for the tingling in the feet, or elsewhere, which marks the return of sensation, after it has been impeded by continued pressure upon a nerve, or by paralysis. Most usually it is a sign of returning nervous power, but sometimes it ushers in an attack of paralysis; this is the case only where there is chronic disease of the brain or spine.

Pins and Needles are sometimes swallowed; the careless and reprehensible practice of holding them in the mouth conducing to this result; unless they occasion inconvenience by sticking in the throat, it is better to let them alone; the latter will generally work their way out of the body, and the former, which on account of their heads, cannot so well do this, will, in process of time, be dissolved by the action of the acids of the stomach on the softer metal of which they are composed; a little vinegar taken now and then will assist this process; if they occasion much pain, and a pricking sensation in the bowels, demulcents and gentle aperients should be administered, Castor Oil is, perhaps, the best. When a needle, in making its way out of the body, approaches the surface, there will be a black dot, or a line visible, with, perhaps, inflammatory symptoms; it is best in this case to cut through the intervening skin with a lancet, and extract the intruder by means of small tweezers; quite large needles have in this way been taken out of persons who were not at all aware how and when they got in.

PINT. In Latin *octarius*, eight, because the eighth of a gallon; the medicinal Pint is 20 ounces, it is written in prescriptions thus—O.

PINTA, Blue stain. A disease which prevails in Mexico, and which appears to be a variety of *Pityriasis* (which see), and *Dandriff*.

PINUS. The name of a genus of plants of

the order *Coniferae*, in which are included *P. Abies* the Norway Spruce, from which Burgundy Pitch is obtained; *P. Balsamea*, the Hemlock Pine, yielding Canada Balsam; *P. Larix* the Larch, yielding Venice, or Brianco Turpentine; *P. Picca* the Silver Pine, yielding Strasburg Turpentine; and *P. Sylvestris* the Scotch Pine, from which we obtain Pitch, Tar, and common *Turpentine* (which see).

PIPER, Latin for *Pepper* (which see). From this root comes *Piperina* a term applied to a peculiar substance discovered in the Black Pepper; it is analogous to the resins. See *Pepper*.

PISIFORM (Latin *pisum*, a pea, and *forma*, likeness). Pea-like, the designation of the fourth bone of the first row of the *Carpus* (which see).

PISTACHIA or PISTACHIO NUTS. These nuts, which are held in high esteem in the south of Europe, are the produce of the *Pistachia Vera*, a Syrian plant of the natural order *Anacardiaceae*, which is now extensively cultivated in Spain, Italy, France, &c. These nuts, which are to be obtained in this country only at considerable cost, are sweet and agreeable; they enter into the composition of ragouts and other dishes, and are used for flavouring ices and creams, besides being eaten as an article of confectionery, coated with sugar. They are considered to be not unwholesome; they yield an oil by expression, which is used for making an electuary for diseases of the stomach. *Pistachia* is the name of a genus of plants, in which, besides the above, are included *P. Lentiscus*, the species which yields *Mastich* (which see) and *P. Terbinthus*, from which is obtained Cyprus or Chio Turpentine (which see).

PITCH (Latin *picis*). The residuum which remains after boiling down tar. Stimulating plaisters are sometimes made of the common black Pitch, but this article possesses no advantage over the *Burgundy Pitch* (which see), and the latter is far more pleasant, and cleanly to use.

PITUITA (Latin for phlegm, from the Greek *ptyo*, to spit). Viscid *Mucus* (which see), also *Phlegm*. The membrane which lines the cavities of the nose is termed the *Pituitary* membrane; that portion of the brain formerly called *Infundibulum*, is now termed the *Pituitary Stem*, and the body connected with it is the *Pituitary Body*, or *Gland*, as we sometimes say.

PITYRIASIS (Greek *pityron*, furfur, or bran). The scientific name for Dandriff; a disease of the skin consisting of irregular patches of bran-like scales, which repeatedly

fall off, and reappear, without crusts or excoriations. Bateman has distinguished the following species of the disease:—*P. capitis*, Dandriff of the head; *P. rubra*; *P. variola*; and *P. nigra*, Red, Variegated, and Black Dandriff. This, like many other affections of the skin, is rather troublesome and annoying than dangerous; it frequently occurs in children, and most commonly in the scalp, but sometimes, with persons of fair complexion, in the face also. Among the poor a prejudice prevails against washing it off, and hence the scales are allowed to accumulate with the dirt, until the part affected presents a very filthy appearance. These scales should at all times be removed by brushing and washing gently, so as not to irritate the skin, and the parts rubbed with common Pomatum, or an Ointment composed of Red Precipitate 10 grains to 1 ounce of Lard. Adults may use an Alkaline like that recommended by Erasmus Wilson, which is:—2 ounces of Solution of Caustic Potash, to 8 ounces of Rain, or Rose water. A small-tooth comb should not be used to remove the scales.

PLACEBO (Latin for I will please). A name given to any medicine administered rather to please, than to benefit the patient. It is sometimes necessary to humour a nervous and irritable patient by administering bread pills, or something equally inert, and it is astonishing the effect that a faith in the means thus used will often produce; of course this is in cases where the disease is more imaginary than real, or such as may be safely left to time, and the operations of nature, provided the patient can be kept in a quiet state.

PLACENTA (Greek *plax*, a plum). Literally, a cake. This is commonly called the after-birth, because its expulsion from the womb follows that of the fœtus; it is a flat fleshy mass, about six inches broad, consisting chiefly of blood vessels which supply nourishment to the fœtus from the mother, through the umbilical cord, or naval string, by which the embryo is suspended, as it floats in the amniotic fluid, secreted by the amnion, the inner membrane of which, with the outer membrane, called the chorion, composes the Placenta. See *Labour*, *Navel*, &c.

PLADAROTIS (Greek *pladaros*, wet). A fungous and flaccid tumour within the eye-ball. It appears to be but another name for Purulent *Ophthalmia* (which see).

PLAGUE (Greek *plege*, a stroke). The name of a disease which is endemic in Egypt and Turkey, &c., and which has made frequent irruptions into Europe. It was denominated *Lannos* by the Greeks; *Pestes* and *Pesti-*

lentium by the Latins. The French of the present day term it *La Peste*; the Italians *Pestilenza*; and the Germans *Pest*. We most commonly speak of it as a *Pestilence* (which see). This disease belongs to the class of malignant fevers; happily it is now unknown in England; its last great and fearful visitation having occurred in 1665; in Malta it has appeared as late as 1816. Its *symptoms* are thus described by Dr. Gregory:—"A feeling of great languor and lassitude ushers in an attack, which for the most part happens towards evening. There is always a cold stage, though it is seldom of very long duration. Heat of skin, headache, and giddiness succeed. The pain of the head is referred to the temples and eyebrows; the eye appears heavy, dull, and muddy. The expression of the countenance changes in a remarkable manner. Sometimes there is a wild and furious look; sometimes a look claiming commiseration, with a sunk eye and contracted feature. The most striking of all the early symptoms of Plague is staggering, and the sudden extreme prostration of strength. A strong tendency to void the urine is generally noticed. The stomach is very irritable, and rejects almost everything presented to it. The tongue is white and moist. The bowels are sometimes torpid, and at other times loose, the evacuations being at all times highly offensive. The speech falters. The pulse is at first small, hard, and quick, but, after the appearance of buboes (which, after one, two, or at the farthest, three days, begin to form in the armpits of women, and the groins of men) it becomes fuller and softer; should these not form, the patient dies delirious very quickly. The pulse is sometimes intermittent; in point of frequency its average may be stated 'at 100. The heat of the skin is seldom very intense. The head is occasionally perfectly clear and collected; at other times stupor occurs immediately after the occurrence of the fit. Some cases of this disease are ushered in by a violent fit of mania; the greatest indifference with regard to recovery prevails, and is always reckoned a most unfavourable symptom."

This disease runs its course in a very short time, proving fatal in the great majority of cases; if the patient survives the fifth day, he commonly recovers.

The remedial measures recommended are various, but none seem to have much effect; therefore it is useless to detail them, the more especially as this is not a disease with which our readers are likely to be called on to grapple. The Plague is un-

doubtedly contagious; but, says Gregory, "the contagion spreads to a very small distance only from the body of the patient; the consequence of which is, that the disease is seldom, if ever, communicated except by actual contact. The dead body does not communicate the disease so readily as the living. The contagion is readily imparted to *fomites* in which it may lurk for a very long time, more particularly if excluded from the air."

Never more, we trust, will the doleful cry—"Bring out your dead!" sound through the deserted streets of a Plague-stricken city in this favoured land of ours; never more may the red cross, marked upon the door, cut off all communication between the dead and dying within, and those without, who, with trembling steps, go about their necessary business, fearing to meet death face to face at every turn. Much as there is yet to be done in the way of drainage and ventilation, and imperfectly as sanitary laws are yet understood and acted upon by the great body of the people, yet there cannot be a question that the last century has seen great improvements in this respect, and to these may in a measure be attributed, our immunity from this fearful pestilence, which indeed "walketh in darkness," wherewith God has seen fit to visit this nation in times past.

PLANTAIN. The plant commonly so called, which is the *Musa Paradisiaca* of botanists, belonging to the natural order *Musaceæ*, is



a native of India, but is now cultivated throughout the tropical parts of Asia, Africa, and America, to the natives of which it affords an agreeable and wholesome article of food, the ripe fruit being scraped and served up as bread. Humboldt has calculated that a piece of ground 100 yards square, planted with 40 Plantains, would produce 4,000 lbs. weight of fruit, while wheat would produce only 30 lbs., and potatoes

1,000 lbs. It is, however, with another plant, called the Greater Plantain or Waybread, *Plantago Major*, of the natural order *Plantaginaceæ*, that we are now chiefly



concerned. The Leaves of this, which is a native plant, are bitter and astringent, and have long been held in popular esteem as a vulnerary; they are still used as an external application to ulcers and indolent scrofulous tumours. The Root has been thought useful in intermittents, but its action appears to be very feeble. A mucilage prepared from the seeds has been found of great service in the catarrhal and mild inflammatory form of diarrhoea.

PLANTARIS (Latin *plantar*, the sole of the foot). The name of a part situated in the sole of the foot, and of a muscle arising from the external condyle of the femur, and inserted into the inside of the os calcis: it serves to extend the *Foot* (which see).

PLANUM Os (Latin *planus*, smooth). An old name, but little used now, for the orbital portion of the ethmoid bone.

PLASTERS. These are compounds of gummy resins, and other adhesive and tenacious substances, used as outward applications; they may be either simply adhesive, as the common Diachylon, or sticking Plaster, or the isinglass or Court Plaster; they may be protective as the Lead Plaster; stimulating like Burgundy pitch; or warm like Cummin Plaster, &c. Out of a long list of pharmaceutical preparations of this class, we cite the following as the most adapted for domestic use:—Common adhesive

or Diachylon, Isinglass, and Soap Plasters, are simply protective, as is also the Lead Plaister: Belladonna and Opium, anodyne; Cantharides, or Lyttæ, blistering; Cummin and Galbanum, warm and stimulant; Mercurial, discutient; Robrans, or Iron, supporting and strengthening; the latter is commonly used as an application to weak or relaxed parts, such as the wrist, ankle, after a sprain; or the back, when the spine wants support; both Cummin and Galbanum are used for the same purpose, but these are too stimulating for many skins, causing unbearable irritation; indeed, with some, even Robrans will do this; in such a case the Lead Plaster had better be applied. The latter is one of the best protections for the backs and other parts, of those who are obliged to lie much in one position. (See *Bed Sores*.) This should be kept in the roll, and spread when wanted; as, if kept spread, it very soon cracks and peals off. Most Plasters intended for use in this or other *temperate* climates, had better be purchased ready for use, as the spreading, which is done by machinery, is much more smooth and even than that can be effected by the hand; the substance now generally employed as the base, is a stout, smooth kind of calico, or dimity; leather, which formerly was much employed, is now so very seldom. Emigrants going to *hot* countries should take plaisters in the roll, and spread them as required upon any convenient material; even paper will do if leather or calico cannot be readily procured; they should take with them a *Plaster spatula* of which we here give a cut.



When wanted for use, thrust the flat end into a fire, and let it remain until sufficiently heated to dissolve the Plaister without causing discolouration; before it is applied to the substance to be melted the heated part should be rubbed on a mat, or other rough place, to cleanse it; if much smoke arises on the application of the iron to the roll, the former is too hot, and should be dipped into water. Let the Plaster drop all over the substance on which it is to be spread, and then with the spatula blend the little lumps, and rub it down until an even surface is obtained; it is best to leave a clear margin of about a quarter of an inch all round, as shown in the diagrams under the head of *Blisters* (vol. 1 p. 104), where also will be seen the most common shapes, with directions about size, &c.; this however, of course, varies greatly according to circumstances, sometimes merely

a narrow band being required, and sometimes a large broad extent of covering. It is a popular fallacy to suppose that Plasters exert any healing influence; they merely protect injured parts from external influences, and, by keeping the edges of wounds, &c., in close apposition to each other, allow the healing powers of nature to have fair play; for wounds, cuts, &c., there is no better adhesive application than the common Diachylon and Soap Plasters, and one or other of these should always be kept in a house. (For mode of application see *Wounds*.)

To remove Plasters in the least painful manner, and without danger of injuring the raw parts beneath, it is necessary to damp them for some little time with a sponge soaked in warm water, or if it is in the hand or any part that can be so treated, immerse it therein for some time; the Plaster will then come off easily, if the strips be taken up separately, beginning at the side farthest from the seat of injury.

PLASTER OF PARIS. Sometimes called *Gypsum* (which see), also Sulphate of *Lime*.

PLATEIASMA (Greek *platys*, broad). A defect in speech, generally observed in persons whose lips are unduly thick, or as it is called blubber-lipped.

PLATYSMA - MYOIDES (Greek *platys*, broad, *mys* a muscle, and *eidōs* likeness). A muscular expansion arising from the cellular substance of the neck, and inserted into the lower jaw, whence it extends superiorly to the face: it is also called *Musculus cutaneus*. It drives the skin of the cheek downwards, and, when the mouth is shut, brings the skin under the lower jaw upwards.

PLEASURE. The excitement, both of body and mind, which arises from innocent Pleasure is no doubt conducive to health, and the wise physician will always recommend this as one of the preservatives of that greatest of earthly blessings. Especially is it desirable that children should have a large share of enjoyment: it is necessary to a proper development of both their moral and physical powers. To the invalid, as a relief, or palliative, it should be afforded as much as possible. It will not cure disease, it is true, but it will in some measure assist the beneficial action of the remedies administered, and it will help to prevent the mind from sinking into that state of despondency which is the most unfavourable to the success of remedial efforts.

PLETHORA (Greek *pletho*, to fill). Repletion; or excessive fullness of the blood-vessels. Phethoric persons are those with

whom there is the greatest tendency to inflammatory diseases; they are stout, and of a florid complexion, short-necked, and short-winded; sometimes very active, and capable of great muscular exertion, but, as a rule, rather sluggish and inactive. They, as it is commonly said, "make blood too fast," and with them, therefore, there is always danger of congestion and apoplexy. How to avoid this danger, is the question which will, it is likely, be asked. We reply.—By avoiding stimulating drinks, and over-indulgence in the pleasures of the table; by taking regular exercise and plenty of it; by tepid bathing, or sponging the skin; and by the employment of saline aperients frequently, to keep the bowels well open. They should not, however, be acted on violently by drastic purgatives; a weak solution of Epsom Salts, or Seidlitz Powders, with now and then 5 grains of Colocynth, and 3 grains of Blue Pill, taken at bed-time. Sometimes bleeding is necessary; but this means of depletion should not be practised too frequently; it affords, perhaps, quicker relief from the head-ache, heaviness, and lassitude which often affect the plethoric, but it weakens the circulation, and impairs the tone of the system. Plethoric persons sometimes obtain relief in a natural manner: they have bleeding at the nose, or an attack of piles, or of diarrhoea. For this they should be thankful; for a safety-valve is found through which relief can be had for the system, without resorting to violent medicines to obtain it, as these often do much mischief. *Plethora ad molem, ad vasa, ad venas*, is that kind in which the redundancy actually exceeds what the healthy state of the individual constitution would require to bear; *P. ad vires*, in which the redundancy is more relative than positive, it is only excessive in reference to the actual state of the system; *P. ad spatium*, in which the Plethora is referred to reduced capacity of vessels, the actual quantity remaining the same; *P. ad volumen*, in which the redundancy arises from increase of bulk, without actual increase of quantity.

PLEURA (Greek for the side). The thin membraneous covering of the inside of the thorax, which also invests the lungs. It forms an extensive process, of which the different parts are distinguished as *P. pulmonalis*, that which covers the lungs; *P. diaphragmatica*, *P. pericardiac*, and *P. costalis*, the reflected membrane, parts of which are so severally named in reference to surfaces to which they adhere. The various affections of the Pleura are thus named: *Pleuralgia*, or *Pleurodynia*, pain or ache in

the side: *Pleuritis* or *Pleurisy*, inflammation of the Pleura; *Pleuropneumonia*, the complication of acute Pleurisy with Pneumonia; *Pleurosthothnus*, Tetanus of the lateral muscles; a spasmodic disease in which the body is bent on one side.

PLEURISY. This, which is the most common form of the above-named diseases, may be caused by exposure to cold, blows, falls, or anything which gives rise to inflammation in other parts; those of a full plethoric habit are chiefly subject to it.

The early symptoms are generally cold chills, shivering fits, and rigor, which is followed by acute pain in the side, a flushed countenance, difficulty of breathing, dry cough, and full, hard, and frequent pulse. Pain is nearly always present, generally in a particular spot under one of the breasts, but sometimes at another part of the chest, or on the shoulder, the armpit, or under the collar bone; it is greatly increased by pressure, coughing, and deep inspiration; the patient, therefore, breathes thick and short, suppresses coughing as much as possible, and fears to exert himself, or to lie down. Sometimes the inflammation causes a sticking of the Pleura, and adhesion of the membrane covering the lungs, and that which lines the chest; at other times there is an effusion of fluid into the cavity.

Treatment.—Copious bleeding from the arm should be at once resorted to if the patient can bear it, to be continued at intervals until the pain and difficulty of breathing is relieved. Leeches, or cupping, and a warm poultice to the seat of pain; a large blister after the latter comes off if necessary; a full dose of Calomel immediately after the bleeding; and then Tartar Emetic about every two hours, beginning with $\frac{1}{2}$ a grain and increasing it to 2 grains; if this produces vomiting and purging lessen the dose again, and add 6 drops of Laudanum to each. When the urgent symptoms are relieved, give Calomel and Opium Pills, 2 grains of the former to $\frac{1}{4}$ grain of the latter every four hours, until the gums are affected; or if this causes watery evacuations, give Grey Powder in 3 grain doses, or rub in a drachm of Mercurial Ointment every 2 hours; the diet must be low, and perfect quiet maintained; the temperature of the room kept up to about 60 deg. Fahr., and the patient somewhat elevated in the bed. Should symptoms of exhaustion arise, the difficulty of breathing increase, and coma or delirium be threatened, recourse must be had to stimulants, such as Beef Tea, with Wine, &c. The following mixture may also be given: Sesquicarbonate of Am-

monia and Laudanum of each $\frac{1}{2}$ a drachm, to Camphor Mixture 6 ounces; take a table-spoonful every one, two, or three hours, as required.

When the patient is convalescent, a nutritive, liberal, but not stimulating diet should be allowed; a regular state of the bowels preserved, and exposure to cold or wet carefully guarded against. A *Spurious Pleurisy* sometimes occurs; it is a spasmodic affection of the muscles of the chest, and is rheumatic in its origin. With this there are not the symptoms of inflammation nor difficulty of breathing, except that caused by the pain or stitch in the side. Exposure to cold or violent exercise will also cause this; it generally yields to warm applications, mustard poultices, or stimulating liniments, if not, leeches may be applied. The best medicines in this case will be pills of Colocynth 3 grains, with Extract of Colchicum $\frac{1}{4}$ of a grain in each, taken every night, and three times a day a Seidlitz draught, with 15 grains of Wine of Colchicum and 6 of Laudanum in each.

PLEXOMETER (Greek *plexos*, percussion, and *metron*, a measure). A term applied by M. Parry to the ivory plate used by him in performing mediate *Percussion* (which see).

PLEXUS Latin *plecto* to weave). A term applied to a net-like crossing and intertwining of blood vessels, absorbents, or nerves, where their minute branches spread out over a considerable surface.

PLICA POLONICA (Latin *plica*, a fold, from *plico*, to knit together). A disease of the hair, which causes it to be plaited or matted together, occurring most frequently in Poland. It has been distinguished by Alibert according to the form it assumed, as *Plique multiforme*, in which the hairs form a number of ropes hanging round the face like serpents; *P. a queue, ou solitaire*, in which the whole hair is matted into one long plait, or tail; this chiefly occurs in females who wear their hair after the natural Polish fashion; *P. en masse, ou larvec*, in which the hair is matted together in one compact mass, which covers the head like a helmet. It has been erroneously said that in this disease the hair both bleeds and possesses feeling; the notion has no doubt arisen from the irritability of the skin at the roots of the hair, causing bleeding and great tenderness there. This disease seldom affects any other part than the scalp, from which an offensive-smelling secretion exudes, which sticks the hair together, and renders the head perfectly noisome, it being generally infested with vermin. The only treatment, which is

known to be beneficial, is the removal of the hair and strict cleanliness.

PLUMBUM (Latin for Lead). A term now applied to this metal and its preparations entirely, although it was formerly used as a general term. Thus: *Plumbum album* was tin; *P. nigrum*, the metal itself (see *Lead*); *Plumbago*, and Black-lead, are names which have been erroneously given to carburet of iron. *Plumbagin* is a principle which has been extracted from a plant of the natural order *Plumbaginaceæ*, called *Plumbago Europæa*, or Leadwort, which is acrid in all its parts, particularly the root, which, when chewed, excites a flow of saliva, and has been recommended for tooth-ache; a decoction of it in Olive Oil is said to have been used as a successful application for the itch, old ulcers, and even cancers. It is no doubt a powerful vesicatory and rubefacient. We give a cut of the plant.



PLUMMER'S PILL. This is the Compound Calomel Pill of the Pharmacopœias, and is a very useful alterative and diaphoretic medicine; it acts upon the bowels very mildly, if at all, and may be taken for a long time without causing anything like salivation. It is often prescribed in skin diseases, and old syphilitic affections. The dose is from 3 to 10 grains every night.

PNEUMONIA (Greek *pneumon*, the lungs, from *pneo* to breathe). Inflammation of the substance of the lungs is so called. Although exhibiting much the same symptoms, and open to a similar line of treatment, it is

altogether distinct from inflammation of the investing membrane of the lungs, called *Pleuritis* (which see). This is one of the most common, as it is also the most dangerous form of pulmonary inflammation; it is called *lobar*, *lobular*, or *vesicular*, according as it affects the whole, or continuous parts of the lobes, their poligonal subdivisions, or vesicles in general. Laennec arranges the general effects of Pneumonia into three degrees: Engorgement or Obstruction, Hepatization, and Purulent Infiltration; the two latter are distinguished by Andral as 1st Red, and 2nd, Grey Hepatization. So similar in every respect are the symptoms and treatment of this form of lung diseases to those described under the head of *Pleuritis*, that we need only refer our readers to that article for information.

From the same Greek root, *pneumon*, we have the medical terms *Pneumatocle*, hernia distended with flatus or wind; *Pneumo-thorax*, a collection of æriform fluid in the cavity of the pleura; *Pneumatosi*s, a distension of the cellular membrane by air; and *Pneumatics*, the science which treats of the mechanical properties of air and other compressible fluids.

PODAGRA (Greek *pous*, a foot, and *agra*, seizure). Gout in the foot (see *Gout*).

PODOTHECA (from the same root *pous*, with *theke*, a receptacle). The cuticle of the foot, applied to an anatomical preparation: so *Cheirotheca*, the cuticle of the hand.

POISONS. The question of What are Poisons? is one by no means easy to answer, as almost every substance which in an over-dose has a poisonous action, when given in a lesser quantity, has a remedial one; and again, the most common and nutritious articles of diet do, when taken in certain conditions, or in certain states of the system, produce poisonous effects.

Taylor, in his "Manual of Medical Jurisprudence," gives this definition—"A Poison is a substance which, when taken internally, is capable of destroying life without acting mechanically on the system." But this is scarcely comprehensive enough, for there are substances which act as Poisons without being taken internally, such as the Carbonic Acid and other deleterious gases; the virus of venomous creatures; and the vehicles of contagious and infectious diseases. This definition will exclude such substances as have a purely mechanical action, such as Pins and Needles, Pounded Glass, Boiling Water or Oil, &c.; and make it necessary for us to consider the corrosive action of mineral acids and alkalies as purely chemical, if we are to class these as Poisons at all, as we

surely must. So, too, Corrosive Sublimato, Cantharides, Arsenic, Mercury, &c., produce their peculiar poisonous effects, when applied to the skin. But this is a question into which we need not go at all deeply. Sufficient for our purpose will it be to notice the general actions of Poisons, and point out the best remedies.

And first as to their effects.—The action of a Poison may be both local, and general, or remote; the first in chemically destroying the part with which it comes in contact, as the mineral acids and alkalies do by corrosion; as Cantharides and Mustard by irritating and inflaming; or as Morphine, Aconite, Prussic Acid, &c., by paralysing the sentient extremities of the nerves. As instances of the remote action, we may mention that of Cantharides on the urinary organs; of Mercury on the salivary glands; of Digitalis on the heart; and of Strychnine on the spinal marrow. Again, says Taylor, "Poisons generally, whether they corrode, irritate, or produce no apparent alteration on the part to which they are applied, destroy life by producing a fatal impression upon a remote vital organ."

With a view to furnish a general theorem for the administration of antidotes, Dr. Paris drew up the following synoptical table of Poisons:—

CLASS 1.—Poisons which act primarily through the medium of the nerves without being absorbed, or exciting local inflammation.

Order 1.—By which the functions of the nervous system are suspended or destroyed. (*Death by suffocation from Paralysis of the Respiratory Muscles*).

Alcohol, Aconite, Camphor, Essential Oil of Almonds, Salts of Lead, Croton Tiglium, Opium, Oil of Tobacco. The fourth and seventh of these may also act by being absorbed; the third and fifth may have also a local action.

Order 2.—By which the heart is rendered insensible to the stimulus of blood.

(*Death by Syncope*).

Infusion of Tobacco, Upas Antiar, &c.

CLASS 2.—Poisons which by entering the constitution, act through that medium with different degrees of energy, on the heart, brain, and alimentary canal.

(*Death from many causes*).

Arsenic, Camphor, Coccus Indicus, Hellebore, Hemlock, Henbane, Lettuce, Meadow Saffron, Muriate of Byrrata, Nightshade (Deadly), Opium, Prussic Acid, Savine, Squill, Tartar Emetic. Of these, Camphor, Nightshade, and Opium, have also a local action.

CLASS 3.—Poisons which, through the medium of the constitution, expend their energies upon the spinal marrow, without directly involving the functions of the brain.

(*Death by Tetanic Convulsions*).

Nux Vomica and the whole tribe of *Strichnos*.

CLASS 4.—Poisons which produce a direct local action on the mucous membrane of the alimentary canal.

(*Death by Gangrene*).

Bryony, Caustic Alkalies, Concentrated Acids, Corrosive Sublimate, Cantharides, Colocynth, Elaterum, Euphorbium, Hedge Hyssop, Muriate and Oxide of Tin, Nitrate of Silver, Nitre, Ranunculi, Zinc, Verdigris.

The commonest and simplest classification of Poisons, however, is into three divisions, viz., *Narcotics*, *Irritants*, and *Narcotic-Irritants*. In the first class, we have the strong Acids and Alkalies, including Sulphuric, Nitric, Muriatic, and Oxalic Acids, with the several forms of Caustic Potash and Ammonia; Arsenic, Corrosive Sublimate, Calomel, and other preparations of Mercury; the Sugar, Carbonate, Oxide, and other preparations of Lead; Brunswick and Mineral Green, Scheele's Emerald, with Blue Vitriol, and other preparations of Copper; Chloride of Zinc, with the Sulphate of the same metal, commonly called White Vitriol; Nitrate of Silver, Tartar Emetic, Savin, Spirit of Turpentine, Cantharides; sometimes Fish, especially Shell Fish; Meat, either too fresh or too stale; and Game eaten in the condition termed "high."

All these, then, and a variety of others, which might be named, are Irritant Poisons, which, when swallowed, usually occasion vomiting very soon, with the common signs of inflammation of the bowels; some of them, which are corrosive, such as the Mineral Acids and Alkalies, produce a burning sensation extending from the gullet to the stomach, directly they come in contact with the mucous membrane, of which they effect the destruction; Corrosive Sublimate does this particularly, and is also instantaneous in its effect; the other substances above enumerated are not so rapid, although they are equally, if not more dangerous.

For the Mineral Acids the readiest antidote is Water, of which as much as possible should at once be drunk; this will dilute them, and then neutralization may be effected by Carbonate of Soda or Potash, Magnesia, Soap in solution, Chalk, Whiting; or, if these are not to be had, old Mortar or Plaster scraped from the walls or ceiling of

a room; Ice and Iced Water are also beneficial. Oxalic Acid also requires the same kind of treatment; and as much of this as possible should be removed by the stomach-pump or emetics. For the Alkalies, such as Pearlash and Ammonia, Vinegar may be given, or any diluent Acid, such as Lemon Juice, or Tartaric Acid, mixed with Mucilage or Starch. Arsenic cannot be neutralized, and therefore should be removed from the stomach as quickly as possible; there is no antidote to this Poison; if it remains in the system in sufficient quantity it is sure to destroy life. (For further particulars respecting it, see *Arsenic*.) Corrosive Sublimate, although not less deadly in its effects, is not so dangerous, because it can be readily converted into Calomel by the addition of Albumen; the patient should, therefore, swallow White of Egg in considerable quantity, and then take a dose or two of Castor Oil with 20 drops of Laudanum in each, to soothe the irritation of the bowels and carry off the Poison, which the Oil also helps to decompose.

For Calomel, Red or White Precipitate, or Vermilion, the same course as above recommended should be pursued.

Red Lead and the Carbonate of that metal are both insoluble substances; the great object, therefore, must be to effect their removal by purging and vomiting; the bowels may be in some measure protected from their action by mucilaginous drinks. Here again Castor Oil is the best purgative. The same remedies should be used for Sugar of Lead, which is a soluble salt.

For Nitrate of Silver, give a tablespoonful of Common Salt, with plenty of warm water. This decomposes the Poison, and acts as an emetic also.

For Blue Vitriol, Verdigris, and the other preparations of Copper, give White of Egg and Castor Oil. Several of these are themselves emetic, and will work their own expulsion with a little assistance, as will Tartarized Antimony, generally called Tartar Emetic; but, to prevent bad after-symptoms, it is best to neutralize the Antimony with some Bark, or Galls, given in the form of powder or decoction; to relieve the sickness, give Opium, in grain doses, every six hours.

Chloride of Zinc has a very rapid corrosive action; it readily dissolves; if speedily diluted with warm water will itself act as an emetic. Encourage the vomiting, and after it give Castor Oil.

Spirits of Turpentine, Nitre, Savin, and Cantharides, besides their irritant action

on the bowels, act specifically on the kidneys; for these give emetics and Castor Oil, with plenty of Barley Water, or other demulcent drinks, with opiates.

Fish, Meat, and Game are generally beyond the reach of emetics before they produce their peculiar symptoms of poisoning; give, therefore a full dose of Castor Oil, with Laudanum, and if, as is often the case, there are colicky pains, give Calomel and Opium, of each a grain, every 4 hours, to the extent of 6 doses if required.

Under the head of *Narcotic Poisons* we must place Prussic Acid, Essential Oil of Bitter Almonds, Opium and its preparations, Woody Nightshade, Alcohol, Ether, Chloroform, &c.

The decomposition of the first two of these may be effected by means of Ammonia; therefore give a teaspoonful of Sal Volatile or Hartshorn in Water; apply strong Liquor of Ammonia, or Smelling Salts, to the nostrils; and, to stimulate the nervous system, pour on the back of the head and down the spine a stream of Cold Water from a jug held at a considerable height. Opium should be removed from the stomach by means of the pump, or strong emetics; Sulphate of Zinc in 30 grain doses every quarter of an hour, with plenty of warm water, is the most effectual. Great drowsiness and stupor is produced by this poison, which must be combated by all possible means; a teaspoonful of Sal Volatile in strong coffee is the best stimulant; it should be repeated about every half hour. For at least 12 hours after swallowing the poison the patient must not be suffered to give way to the drowsy inclination, for if he sleeps he will probably wake no more; he must be kept constantly in motion, and be stimulated by pinching, pricking, flagellation with a wet towel, or any means that may suggest themselves; when it is found that the patient can keep awake for an hour by the simple exercise of his will, he may be suffered to sleep, but not before.

Woody Nightshade and Hellebore, must be removed from the stomach by the means above directed; the soporific effects are not so strong as those of Opium, and may be overcome by gentler means. Alcohol, Ether, and Chloroform should be removed by the stomach-pump or emetics (for further particulars respecting the first, see *Intoxication*.) Many deaths have occurred from inhalation of the latter, and in very few cases has it been found possible to restore animation when the state of syncope has supervened; efforts should, however, be made to introduce air into the lungs, and

to stimulate the muscles of respiration to action by passing the finger down the throat and tickling the entrance of the wind-pipe, &c.: the same attempts to inflate the lungs as those directed under the head *Drowning* should be persevered in for a long time. Water should be gently sprinkled, but not dashed in the face.

The *Narcotic-Irritant Poisons* are Nux Vomica or Strichnia, Colchicum, White Hellebore, Digitalis, Belladonna, Conium, Monkshood, Laburnum Seeds, Yew Berries, Poisonous Mushrooms, &c.

The first of these is one of the most deadly of vegetable Poisons, but if free vomiting can be produced directly it has been taken, there is a chance for the life of the patient, to whom, after the vomiting has ceased, should be given a teaspoonful of Sal Volatile in Water every two or three hours until he is sufficiently recovered. (See *Strichnia*).

For all the rest of this class of Poisons the same kind of treatment is necessary; Colchicum and Hellebore exhaust by purging, and by depressing the action of the heart, and this latter effect is ascribable to all. The stomach-pump or emetics, Castor Oil and Laudanum, followed by Brandy and Sal Volatile, are the remedies to be used. Poisonous Mushrooms have been known to remain in the stomach undigested, therefore vomiting should be produced in this case, although the Poison may have been long swallowed.

There are many other vegetable Poisons of the Narcotic-Irritant class, as well as of the other kinds here specified which might have been included in the above list; but as allusion to all of them is made under their several heads, it was scarcely necessary to give them here. We have mentioned the principal Poisons, and indicated, we trust with sufficient clearness, the general plan of treatment to be pursued.

The *symptoms* of poisoning in particular cases are given under so many heads which have relation to the nature and properties of the Poisons themselves, that we scarcely need dwell upon them here at any great length. With those of the *Irritant* class, we have generally violent vomiting, purging, and intense pain in the abdomen, usually occurring within half an hour of the swallowing of the deleterious substance; with those of a corrosive nature the effect is immediate, an acrid, burning sensation in the throat attending the act of swallowing the Poison. The *Narcotic* class produce vertigo, paralysis, coma, and sometimes tetanus; these have no acrid taste, and d.

not, like the first, inflame the viscera, nor cause purging and vomiting. *Narcotic-Irritants* have a compound action—that is, their symptoms include those produced by both the other classes. When any of these symptoms come on suddenly to one who, up to the time of the attack, has appeared in good health, and especially if it be soon after swallowing either solids or liquids, we may reasonably suspect that he is poisoned, and should at once endeavour to find out what he has taken likely to produce such results. We should, however, bear in mind that there are certain forms of disease which, as it were, simulate the symptoms of poisoning, such are cholera, enteritis, peritonitis, strangulated hernia, hæmatemesis, &c.

In apoplexy, epilepsy, some diseases of the heart and brain, and rupture or distension of the stomach, we have the same symptoms as those of narcotic poisoning. It behoves us, therefore, to make close inquiry into the cause of the dangerous symptoms, and not adopt remedial measures too hastily, although we know that promptitude in adopting the right measures is of vital importance. Hence we see how desirable it is that one skilled in the diagnosis of disease should be at once summoned in a case of suspected poisoning; if the aid of such cannot be procured at once, it is better to adopt such means as a limited knowledge will suggest than to let the patient perish for want of help. It is popularly believed that there are certain antidotes for particular Poisons, but this is not the case; there are, therefore, three great principles to be kept in view all through the course of treatment: 1st, to remove the poisonous matter from the stomach as soon as possible; 2nd, to protect the coats of the stomach against the action of the Poison, by involving it in some viscid substance; 3rd, to act upon the substance chemically so as to effect a change in its nature—to render it inert or innoxious—this, as we have shown, can in some instances be done; 4th, to combat the constitutional effects of a Poison by such means as applying stimulants and antagonists to narcotics and the like.

POLYCHRISTUS (Greek *polys*, many, and *kreistos*, useful). Applied to medicines which have many virtues or uses. We find this prefix also in several botanical names, and the medical terms *Polydipsia* (Greek *dipsa*, thirst), Excessive thirst; *Polysarxa* (Greek *sarx*, flesh), Bulkiness or *Corpulency* (which see, and *Fat*).

POLYGALIC ACID. An acid prepared from the Virginian snake-root, the *Polygala Senega* of botanists, and some other species: from

which also is obtained the alkaloid *Polygalin*, being the active principle of the plant.

POLYPUS is also a compound of this prefix, with *pous*, a foot; it is applied to a tumour generally occurring in the nose, but sometimes in the womb, or the ear, and so named from an erroneous idea that it had many roots or feet; it is the result of an excessive growth of the mucous membrane, and sometimes assumes a malignant character; it may be either of a soft texture so as easily to tear and bleed, or firm and fibrous, or even almost cartilaginous; the colour is commonly a yellowish grey, and it has little or no sensibility, although it causes much pain by its pressure upon the surrounding parts, stoppage of secretions, &c. It is attached to the surface from which it springs by a narrow neck like a footstalk; when in the nose it interferes with the breathing, so that the patient sleeps with the mouth open; in this situation it may sometimes be destroyed by the persevering use of astringent applications, such as the Tincture of Steel applied with a camel hair brush, twice a day, or a little Burnt Alum taken like snuff. In the womb, Polypus can only be treated by a surgeon, as here, and indeed elsewhere, an operation is generally required for its removal, ligatures, scissors, or forceps being used for the purpose; of the kind of instrument we give an example or two: the operation if skilfully performed is not a dangerous one, and it is necessary, for although a Polypus is commonly of slow growth, it is at all times very inconvenient, and often it increases very rapidly, and assumes a malignant character, in which case there is little hope for the patient. See *Tumour*.

POMPHOLYX (Greek for a water bubble). An eruption of bullæ, or blebs, clear vesicles without any surrounding inflammation, and unattended with febrile symptoms; they break and heal without leaving any scale or scar. Willan divides them into the following species—*P. benignus*, *P. diutinus*, and *P. solitarius*, Mild, Chronic, and Solitary Water Blebs.

But little is required in the way of medical treatment for these eruptions, which seldom produce much constitutional derangement. A saline aperient will be sufficient, just to keep the system cool at first, and afterwards, perhaps, a short course of tonics, but this latter is only necessary in exceptional cases.

The term *Pompholyx* has been sometimes applied to the White Oxide of Lead.

POMEGRANATE. This plant, which is the *Punica Granatum* of botanists, and belongs

to the natural order *Myrtaceæ*, yields a pleasantly acid and sweetish fruit, which is used for the same purposes as the orange. The bark (*Cortex granatum*) is powerfully astringent, and is employed in the form of



decoction as a gargle for sore throats; it is also given in diarrhoea, and used as an injection in leucorrhœa; the powder has been given in intermittent fever, dose 20 grains, but it is not so effectual as Bark, or Quinine; the natives of India give it as a vermifuge, and it is said to have proved successful in some cases in this country. A bitter principle has been extracted from it and called *Punicin*.

POMUM ADAMI (Latin for Adam's Apple). A name given to the prominent part of the thyroid cartilage, so called because it projects more in men than in women.

PONS VAROLII (Latin for Varolius' Bridge). This is the central part of the brain, situated between the cerebrum and cerebellum, and united to both. Gall named its anterior surface the *Commissure of the cerebellum*.

POPLITEUS (Latin *plico*, to fold). A muscle arising from the external condyles of the femur, and inserted into the superior triangular surface at the back of the tibia; it binds the thigh and the leg. *Poples* is the name given to the ham.

POPPY. The *Papaver Somnifera*, or Common Poppy, of the natural order *Papaveraceæ*, is, perhaps, the most important plant



of the *Materia Medica*, for all its parts, but especially the capsule or seed-vessel, yield a white opaque narcotic juice, called *Opium* (which see). With us the Poppy grows wild in most parts of the country; but it is from the Asiatic provinces of Turkey, Egypt, Persia, and India, that we obtain our chief supply of this drug. The Poppy heads used for fomentations are mostly of home growth; their anodyne properties render them valuable for soothing fomentations, for which purpose they should be broken up and boiled, the liquor only being used; into this, when quite hot, a flannel should be dipped and wrung out, and then laid on the part affected, dipping it afresh as soon as it begins to cool: for this purpose the seeds need not be used, as they possess no medical virtues; they contain an oil useful in the arts, which is obtained by expression.

Extract of Poppies is made by boiling down 15 ounces of bruised Poppy heads in 1 gallon of water, until it is reduced to 4 pints; strain the liquor, and evaporate to a proper consistence; it is not so strong as Opium, and may be given in doses of from 2 to 10 grains, as an anodyne.

Syrup of Poppies is thus prepared:—Poppy heads bruised 3 pounds, put into 5 gallons of water, boil down to 2 gallons; strain, and again boil to 4 pints; strain, and set aside to cool, and allow the dregs to subside: again boil to 2 pints; and in this dissolve 5 pounds of Lump Sugar, pour into a vessel to cool, and add Spirits of Wine 5 fluid ounces; this forms an ingredient in

many cough mixtures, and is often given to children to soothe them when fretful, a most reprehensible practice; the dose for an adult is from 2 to 4 drops.

Syrup of Red Poppies (*Syrupus Rhæados*), is made by pouring on a pound of Poppy leaves 1 pint of boiling water; let it macerate for 12 hours, then strain, and add 3 pounds of sugar; boil until well dissolved, then add Spirits of Wine $2\frac{1}{2}$ fluid ounces; it is questionable whether there is much medical virtue in this; it is chiefly used as a colouring material.

POPULIN. An alkaloid found in the bark of the *Populus Tremula*, and some other species of Poplars; this bark is stomachic and tonic, very bitter, and is sometimes used as a febrifuge; its ashes, which are alkaline, are said to be drunk, mixed in water, by the people of Siberia, morning and evening, for syphilis and scorbutic affections.

PORK. The Jews and Mahomedans do wisely to eschew the flesh of the hog, for of all meats it is the most indigestible. According to a table drawn up by Dr. Beaumont, exhibiting the average time required for the digestion of different articles of food, five hours is the time given to Pork; the eating of which is not unfrequently followed by an attack of diarrhœa, and sometimes even by symptoms of poisoning; but, in this case, it is probable that either the animal is diseased, or that there is some peculiar idiosyncrasy in the state of the patient, which causes such an effect. Our readers will understand then, that we warn them against the use of swine's flesh; neither fresh nor pickled is it good food: although it may be taken with impunity by those who lead an active life, and have strong digestive powers. In the dried and smoked state, it is sometimes beneficial to invalids. See *Bacon*.

PORRIGO (Latin, to spread about). A disease of the head, sometimes called Moist Scall; it consists of an eruption of straw-coloured pustules, conereting into yellow or brownish crusts, or cellular scabs. Bateman distinguished seven distinct species:—1. *P. larvalis* (*larva*, a mask), so named from its enveloping the face like a mask; by some this is called *Crusta lactea*, or Milk Scall; 2. *P. furfurans*; 3. *P. lupinosa*; *P. scutulata*; *P. declavans*; *P. favosa*—that is, Farfuracious or Thievish, Lupin-like, Scalled Head, Ringworm, and Honeycomb Scall.

The treatment of these various forms of skin disease is essentially the same; they most commonly occur in childhood and

especially during the period of dentition, and seem to be intimately connected with the disordered state of the bowels, which generally prevails at that period of increased irritability of the system. When they appear in adults they are, as a rule, preceded by some constitutional derangement, manifested by headache, an uneasy state of the stomach, loss of appetite, and febrile symptoms; in adults, too, the pustules are more extensive, and the crusts thicker and harder than in children; it is commonly the *P. favosa*. The general treatment consists in correcting the irritable state of the stomach, and clearing the alimentary canal of crude, undigested matter; a powder like the following will best effect this with children:—Grey Powder, 12 grains; Antimonial Powder, 6 grains; Sesquicarbonate of Soda, Rhubarb, and Cinnamon Powder, of each $\frac{1}{2}$ a drachm: divide into 6 powders, and take one every other night; if for a very young child, half the strength will do. Adults may take Compound Rhubarb and Blue Pill, 3 grains of the former to 1 grain of the latter; 1 every night for the first week, every other night for the second.

The local treatment will be the application of Ointment of Zinc, Acetate of Lead or Tar with Sulphur; should it prove obstinate, apply morning and night, Ointment of Nitrate of Silver, diluted with three times its weight of Lard. Dr. A. Thomson recommends the following lotion:—Solution of the Subacetate of Lead, $1\frac{1}{2}$ drachms; Hydrocyanic Acid, 2 drachms; Distilled Water, 6 ounces. Much depends upon diet, nothing crude or indigestible should be taken to irritate the system; and much also on cleanliness; Soap and warm Water should be frequently used, and the patient should take regular and gentle exercise; if weak he should have nutritious, although not rich food: Milk and plainly cooked Mutton are the best. These are generally tedious cases, and therefore immediate success must not be looked for. See *Favus*, *Skin Diseases*.

PORRUM. Latin for a *Leek*, (which see, and *Allium*).

PORTER. In convalescence from an acute disease, there is often scarcely anything that is more pleasant, and indeed more beneficial to the patient, than this beverage, brewed, as our readers are doubtless aware, from malt very highly dried; what else there may be in it, an analytical sanatory commissioner would sometimes be puzzled to tell; we apprehend, something very fattening, if we may judge by the burly speci-

mens of humanity who do the heavy work of breweries, and are said to consume fabulous quantities of it. From its body, taste, and dark colour, as well as the effect here hinted at, we should imagine it to contain a large amount of the saccharine principle; of alcohol it has, according to Johnston, from $3\frac{1}{2}$ to $5\frac{1}{2}$ per cent., which is much less than Brown Stout, and Bitter and Strong Ales. Many deleterious ingredients are said by some to enter into the composition of London Porter. Among them we have named opium, nux vomica, or strychnia, henbane, cocculus indicus, tobacco, extract of poppies, and copperas; but it seems very doubtful whether all, or any, of these are much employed by the large brewers, although they may sometimes probably be by the retailers, who dilute, and then "doctor" the beverage, to give it the appearance of the genuine article, and a fictitious strength. Dr. Ure's assertion, that the best London Porter "always contains opium," does not appear to be borne out, for Taylor, in his *Manual of Medical Jurisprudence*, says—"In repeating Dr. Ure's experiments, I have not obtained any results indicative of the presence of opium in this liquid."

That Porter is highly beneficial in many cases, every medical man can testify; as a tonic, it is superior to every other form of malt liquor, than which, it is less likely to turn acid on the stomach, or to cause gravelly deposits in the urine. Dr. Prout recommends its use as a tonic in diabetes, for invalids and delicate persons, it should always be procured in bottles, and from some establishment where it is not likely to have been sophisticated.

PORT WINE, when good, is one of the most valuable remedial agents which the physician can call to his aid; but how seldom can he depend upon obtaining it genuine as imported! it has been said that ten times as much so-called Port Wine is drunk in this country as comes into it from abroad; therefore we know that a large proportion of it must be manufactured here, and how manufactured, let the analytical chemist declare. Sloe juice, and logwood, and many other substances, not so innocent in their nature, are said to be employed; and, unfortunately, it is chiefly the poor, who can only purchase the cheaper kinds, who are the principal sufferers by this adulteration.

In the low stages of fever and general debility, the use of Port Wine is commonly attended with good results; and many a convalescent from an exhausting disease has felt the good effects of its tonic and

stimulating properties; generally it contains a larger percentage of spirit than is desirable, and this is not altogether the result of fermentation, but is added by the foreign maker to render it acceptable to the English consumer. This is one of the dry strong wines; it contains, according to Brande, an average of 20.96 per cent. of alcohol: much of the colouring matter of the grape is pressed out in its preparation, as well as of the astringent principle and extractive matter: hence the dark tint of the wine, its acidity, fruity taste, and body. This stands first on the list of foreign wines for its proportion of absolute Alcohol, and fifth in the order of sweetness. See *Wines*.

PORTIO DURA. The hard portion of the seventh pair of nerves, generally known as the facial nerve, and the respiratory of the face; the soft portion of the same is called *Portio mollis*. See *Nerves*.

PORUS (Latin for a pore). A minute orifice in the skin, which serves as a passage for the perspiration, cutaneous absorption, &c.; also a small interstice between the particles of matter which compose bodies. The slender roots of the hepatic duct, arising from the granulations of the liver, are called *Pori Biliarii* (Biliary Pores). See *Liver*, *Skin*.

POTASH, or POTASS. An alkali which exists largely in all vegetable substances, from which it is obtained by burning; hence its common name. Its metallic base is *Potassium*, of which it is a compound, with oxygen. In an impure state it is called *Pearlash*, *Kali*, or *Kelp*.

Many of the preparations of this substance are used medicinally, and are justly esteemed as among the most efficacious of remedies. The *Caustic*, or *Fused Potash*, is powerfully escharotic, and is sometimes employed in the formation of issues and in the destruction of extraneous growths; being combined with lime, it is more manageable, as well as effectual. *Acetate of Potash* is mildly cathartic, diuretic, and deobstruent; it is useful in febrile diseases, dropsies, icterus, and visceral obstructions: dose, from 1 to 3 scruples; as an aperient, from 2 to 3 drachms: *Carbonate of Potash* is diuretic, antacid, and deobstruent; useful in dropsy, acidity of the stomach, and glandular obstructions: dose, 10 to 30 grains, properly diluted; 1 scruple dissolved in 8 ounces of Water, and 4 drachms of Lemon-juice, makes a pleasant effervescent draught.

Bicarbonate of Potash has the same properties as the last, but is less acrid. *Hydrate of Potash* is used only externally as a caustic. *Iodide of Potassium* is much used

in secondary syphilis; it is a good alterative, and very serviceable in skin diseases and vitiated states of the system generally; the dose is from 2 to 6 grains.

Nitrate of Potash, or Saltpetre, is diuretic and refrigerant; in large doses, purgative; externally, cooling and detergent. Much used in dropsies, fevers, herpetic eruptions, active hæmorrhages, gonorrhœa, &c. A small piece allowed to dissolve in the mouth often removes incipient cynanche tonsillaris. Hence its utility in gargles.

Sulphate of Potash. This is the *Kali vitriolatum* of the old pharmacopœias. It is deobstruent and purgative, and is employed in visceral obstructions. As a purgative it must be taken in $\frac{1}{2}$ ounce doses; as a deobstruent, from 1 to 3 scruples.

Sulphuret of Potash is expectorant, diaphoretic; externally, detergent. Dose, from 5 to 15 grains, in pills, twice a day.

Supersulphate of Potash is refrigerant and purgative. Given in cases where it is desirable to exhibit Sulphuric Acid, and at the same time open the bowels. The dose is from 1 scruple to 2 drachms.

Supertartrate of Potash, commonly called Cream of Tartar, is mildly purgative, refrigerant, and diuretic. Dissolved in water, with a little White Wine, Sugar, and Lemon-peel, it makes the pleasant diet drink called Imperial. Dose, 1 to 3 drachms, combined with 1 scruple of Borax, to excite the kidneys; to open the bowels, 4 to 8 drachms.

Tartrate of Potash, purgative; given to open the bowels in febrile diseases, mania, and hypochondriasis, and as an adjunct to senna and the resinous purgatives in solution, the griping effects of which it corrects, in doses of 1 scruple to 1 ounce. There are several other compounds of Potash with Iron and other substances.

POTATO. This common culinary vegetable is the *Solanum Tuberosum* of botanists, belonging to the natural order *Solanaceæ*. Sir Walter Raleigh has the credit of introducing it into this country, in 1568, from Virginia, but it was long before its alimentary properties were known and appreciated out of Ireland, where the great navigator first planted it. As a field crop, Potatoes were not cultivated here until about the year 1760. Next to wheat and other cereals, they are undoubtedly the most valuable for human food. According to chemical analysis, the tuberous roots, which are the part eaten, consist of 75.52 per cent. of water; 15.72 of starch; 0.55 of dextrine; 13.47 of impure saccharine matter; 5.77 of casein, gluten, and albumen; 1 of fatty matter; 13.31 of

fibre, with coagulated albumen. This is in a fresh state. When dry, the proportion of the more nutritive ingredient, is greatly increased. The fecula, or Potato starch, in which the chief amount of nutriment consists, is, when well prepared, a beautifully white, and soft crystalline powder, readily soluble in hot water, but not at all so in cold; it is more light and easy of digestion than flour of wheat; and, for invalids, may be made into puddings, or taken as arrow-root, or used to thicken milk, or for any other purpose to which flour is applied. This preparation is superior to sago, tapioca, or any other of the exotic feculæ, and its cheapness recommends it to general use. Mixed with ground Coffee and Olive Oil, it forms a beverage more nourishing than pure Coffee; and, combined with Cocoa or Chocolate, renders these articles of diet less rich, and more suitable for weak stomachs. We need not here dwell on its application to the fine and useful arts, whether in the form of dextrine or artificial gum, or in any other form. It yields a sugar which resembles that of grapes, and may be used for making sweetmeats, or as a substitute for honey, and a spirit is distilled from the tubers which is milder than brandy, and as rich in flavour as raspberries or violets. In some parts beer is made from Potatoes, combined with malt. Boiled and beaten with new milk, they are made into a kind of cheese in Saxony, and sometimes vinegar is prepared from them. Cattle feed on their haulm, and from their leaves an extract is prepared which is a powerful narcotic, and has been found serviceable in chronic rheumatism, and painful affections of the stomach and uterus. These are but a few of the uses to which the various parts and constituent elements of the Potato have been applied. As we have before said, it is undoubtedly nutritious, containing much starch and gum, and other matters required to sustain the respiratory processes, and to build up the muscular and other constituents of the animal body, but a man living solely on Potatoes, requires a very large quantity to keep him in health and strength; an Irish labourer, it is said, consumes from 7 to 10 pounds per day, and this latter quantity contains no more real nutriment than a pound and a half of wheaten bread. So we find that the Scotchman on his oatmeal, and the Englishman on bread and meat, is capable of more sustained exertion, and less liable to be the victim of epidemic diseases, than the Potatofed Irishman. Of all vegetable food this is the best; but man requires a due admixture of animal food.

POTION. (Latin *potio*). Sometimes applied to a medicinal compound; a draught or dose of liquid medicine. Majendie's *Potio Pectorale* was composed of Hydrocyanic Acid, 15 drops, Syrup of Marsh-mallows 1 oz., and Infusion of Ground Ivy, 2 ozs. Dose, a teaspoonful every two hours, for coughs and spasmodic affections of the bronchiæ.

POULTICE. On the utility of Poultices in cases where the application of warmth and moisture is required we need not here insist, for all who have had anything to do with the treatment of disease are fully aware of this. Very often, however, they fail of producing the expected good effects because they are not properly prepared or applied; we therefore deem it well to give directions for the preparation of those most commonly employed.

Bread and Water Poultice.—Put into a basin a sufficient quantity of bread crumbs, and cover it with boiling water; let it stand with a plate over it to keep in the steam for a minute or two, then draw off the water, and turn out the contents of the basin into a piece of folded linen, sufficiently large to cover the affected part; to which, having first spread over it a little lard, to prevent its sticking when dry, apply the Poultice next the skin, keeping it close by means of a bandage, or wrapper of some kind. If not required warm, merely soak sufficient bread in cold water, and apply it, when saturated, on a fold of linen, as directed above.

Linseed Meal Poultice. Pour some boiling water into a basin, and add gradually the meal, stirring with a stick until the mixture becomes quite a stiff paste; then spread it an inch thick on folded linen, and apply.

Mustard Poultice. To make this take as much as may be required, in equal proportions, of best Flour of Mustard and Linseed Meal, or Bread Crumbs; put them into a basin previously warmed, and add gradually as much boiling water as may be necessary; grease, and apply as above directed: or simply mix the Mustard with hot water, spread the paste on linen, place over it a piece of Muslin, and place it next the skin; if it is desirable to make it more stimulating, some scraped Horse Radish will have this effect. The length of time that a Mustard Poultice may remain on must be regulated in great measure by the feelings of the patient. (See *Mustard*.)

Yeast Poultice. Add to half a pound of Linseed Meal, in a basin, a quarter of a pint each of Beer Yeast and Water heated, mix gradually with a spoon or stick: spread on

linen, and apply. It should be renewed every six or eight hours, as should the Linseed Meal Poultice.

Charcoal Poultice.—Add to a common Bread and Water Poultice, while quite hot, about an equal quantity of Linseed Meal and Charcoal; mix, spread on linen, and apply. Useful for gangrenous and fœtid sores.

Salt and Water Poultice is made like one of Bread and Water, by merely dissolving a table spoonful of Common Salt in the Water previous to mixing: this is recommended by Cooper for chronic abscesses. For method of making *Bran Poultices* (see *Bran*).

Almost any soft substance which will retain heat and moisture may be used to form a Poultice, which should be perfectly smooth, and free from lumps or hardness; recently a preparation called *Spongia Pilina* has been employed; this has merely to be soaked in a hot liquid, drained out, and laid on with oiled skin, or some other waterproof material, over it; indeed, all Poultices should be so covered, the heat and moisture is thus retained longer than they otherwise can be.

Medicated Poultices are frequently prepared by using a decoction or infusion of the medicinal agent, such as Hemlock, or Poppy, instead of plain Water, with Bread or Oatmeal. In the Dublin Pharmacopœia this direction is given:—Take of Dried Hemlock Leaves 1 ounce; Water, a pound and a half; boil down to a pound, and add of Powdered Hemlock Leaves sufficient to make a Poultice. This is often used for lulling pain on cancerous sores, &c.

Arrow-root Poultice is recommended by Dr. A. T. Thompson, as a soothing application for irritable sores, &c. Hops, Camomiles, Scraped Carrot and Turnip, and a variety of other substances, are also used for this purpose, but it is doubtful whether they possess any advantages over those more commonly employed.

Poulticing of wounds and abscesses is sometimes carried too far. Up to a certain point it is good; but when the discharge becomes thin and serous, and increases rather than diminishes, and the healing process appeared to stop, it is time to stay this kind of application, and substitute Water Dressing, which often gives a more healthy character to the affected part.

POURPART'S LIGAMENT. Sometimes called the *Ligament of Fallopius*. A ligament extending from ileum to the os pubis.

POWDERS. This is a very common form of administering medicine, especially to children; it is one in which the peculiar

properties of the various drugs are most easily and expeditiously developed. Powders may be either simple or compound, consisting of one drug, or two, or more. An enumeration of the former would be that of all the dry substances in the *Materia Medica*, for all can be reduced to powder, and all are sometimes so exhibited. The latter are also very numerous; we need only mention the few which are most available for domestic use:—*Aromatic, or Compound Cinnamon Powder* is composed of Cinnamon, 2 ounces; Cardamom Seeds, $1\frac{1}{2}$ ounces; Ginger, 1 ounce; Long Pepper, $\frac{1}{2}$ ounce, all finely powdered, and well mixed; this is useful as a stimulant and carminative; dose, 5 to 10 grains. *Compound Aloes Powder*, (see *Aloes*). *Compound Alum Powder*, (see *Alum*). *Compound Antimonial Powder*, (see *Antimony* and *James's Powder*). *Compound Chalk Powder*, given as an astringent and anti-acid in acidity of the stomach and diarrhœa; its composition is Prepared Chalk, 4 ounces; Cinnamon, 2 ounces; Tormentil Root and Gum Acacia, of each $1\frac{1}{2}$ ounces; and Long Pepper, $\frac{1}{2}$ an ounce; the dose is from 5 to 30 grains. The same powder with Opium, in the proportion of $1\frac{1}{2}$ grains to a drachm, is very useful as an absorbent and anodyne for children afflicted with irritative diarrhœa during dentition.

Powder of Mercury with Chalk, commonly called *Grey Powder*. (See *Mercury*).

Compound Ipecacuanha Powder. (See *Ipecacuanha* and *Dover's Powder*).

Compound Jalap Powder. (See *Jalap*).

Compound Rhubarb Powder. (See *Gregory's Powder*).

Compound Scammony Powder. Strongly cathartic; useful for worms. Composition, Scammony and Jalap, of each 2 ounces; Ginger $\frac{1}{2}$ an ounce. Dose, 5 to 10 grains, usually with a grain or two of Calomel.

Compound Tragacanth Powder. Composed of Tragacanth, Acacia, Starch, and Sugar; useful for administration of Calomel and other heavy powders to children, or to rub down for an emulsion for coughs.

In preparing Powders, it is essential, that all the ingredients should be very finely powdered, and that the incorporation of them be complete; for many of them a metal mortar should be used, as they require much beating and grinding; they should be passed through a sieve of lawn or fine muslin, and care should be taken to protect the nostrils, as the inhaling some of them will cause great irritation of the bronchial passages, as well as of the nostrils and eyes, if not worse consequences. On the whole,

it is, perhaps, best to procure them from a respectable druggist ready made. They should be kept perfectly dry, in well-closed bottles, as some of them, if exposed to the air, will cake and become hard; and others will lose their medicinal properties. Most Powders should be given in some thick substance, such as honey, treacle, or gum, as in a thin fluid they will sink to the bottom before they can be drank. (See *Medicines*).

PREPUCE (Latin *præputium*, from *pre* before, and *putio* to cut off). The foreskin of the penis; it is connected with the under part of the glands by a triangular fold termed the *frænum* (bridle) *præputii*. See *Penis*.

PRACTICE. We have here to do with this term only in so far as it relates to Medical Practice—the business or profession of the general “practitioner,” as we call one who practices the healing art in all its branches, in contradistinction to the physician, who does not undertake surgical cases, nor attend confinements. This term has superseded that of apothecary, which was, until lately, applied to all medical men who dispensed their own drugs; they being the legitimate successors of the less highly educated chemists and apothecaries, who, as they still do, prepared the physicians’ prescriptions.

That Practice in medicine, as in all other arts and sciences, is better than theory is true, but only to a certain extent; but by itself, that is, unless based upon theory, it is mere guess work. There are plenty of unauthorized medical practitioners, who cannot give a sound reason for their peculiarities of treatment, and are, therefore, as likely to be wrong as right; but theorizers are generally men who have arrived at their conclusions only after a long course of study and accumulation of facts, the result of the labours of others, if not of themselves. The theory of such a man is better than the practice of an ignorant quack, however shrewd and observant he may be. Happily, in the legal Medical practitioners of the present day, we commonly get both extensive and skilful Practice founded upon sound theory, and therefore give them our fullest confidence.

PRECIPITATION. (Latin *preceps*, headlong). A falling down; the process of separating solids from the solutions in which they are contained. The substance so separated is called a *Precipitate*, and that employed to produce the effect a *Precipitant*. We might give many examples of alkaline, earthy, and metallic Precipitates which are used medicinally, but it is needless; two of the most familiar are the **Red and White**

Precipitates, both preparations of *Mercury* (which see).

PRECOCITY (Latin *precocitas*, ripe before its time). Premature development of sexual organization, or of mental power, is by no means uncommon; in either case, it is to be deplored, as a sign of disease, which is likely to lead to early decay. Parents are too fond of exhibiting their precocious children, and stimulating, by every means of excitement, their already morbidly-active faculties of thought; this is a great mistake; every effort should be made to counteract such a tendency of the mind to overmaster the body. Particularly clever children seldom attain maturity, and if they do, it has been observed, as a rule, that they make remarkably dull, or sickly men and women. When, therefore, it is noticed that a child is, as it were, preternaturally clever and acute, he should be kept as much as possible from mental study; let him have plenty of bodily exercise to strengthen and develope his frame, and to divert the nervous power from the brain to the body generally.

PREDISPOSITION (Latin *pre*, before, and *disposo*, to induce). Previous fitness for any change or impression; such as that of the body for disease; of the seasons to generate sickness. Among the chief Predisposing causes of disease may be named hereditary taint, age, sex; personal peculiarities and temperament; a vitiated condition of the blood: depraved, irregular habits, arising from a depressed state of the mind, from fear, &c. These must not be confounded with the exciting causes of disease, or those which actually produce it; they, as it were, prepare the system for its reception: it is the produce or absence of this Predisposition which constitutes the safety or danger of persons exposed to infections or other forms of sickness; thus, we often see one stricken with fever, while another, placed in precisely the same circumstances, and who appeared equally liable to take it, escapes. This is a subject full of interest, both to the psychologist and physiologist, but we cannot pursue it here. Allusion is made to it under several of our subject-headings, such as *Hereditary*, *Temperament*, &c.

PREGNANCY. Utero-gestation, or the period of child-bearing; that is, from the time of conception to that of delivery, extending over 40 weeks, or 280 days. It is commonly set down as 9 calendar months, but this would make only 275 days; or, if February be included, 272 or 273 days, that is, 39 weeks only instead of 40, or, as

Dr. Burn says, 9 calendar months and a week. In making the necessary provision for the coming on of labour, it is best to calculate from midway between the last occurrence of menstruation, and the one which would have followed, if conception had not taken place, and allow 9 calendar months from that time; thus, if menstruation had taken place on the 1st of January, labour might be expected some time about the middle of October.

The chief *signs* of Pregnancy are, 1. The cessation of the menses; although this is by no means an unfailing sign, for sometimes this discharge will cease from other causes, and sometimes it will continue after conception has taken place; 2. Morning sickness, which generally commences about the fourth or fifth week, and lasts to about the fourth month; with some this is but slight, and causes but little inconvenience, but with others, it is more continuous and serious, sometimes causing the rejection of nearly all food for a very considerable period; this symptom, again, cannot be taken as a proof of pregnancy, it is merely a suspicious circumstance, to be watched in connexion with others; 3. Enlargement of the breasts, which generally increase in size about two months after conception; they also become tender and sore, they throb and burn, and when pressed by the hand, have a hard knotty feel, in consequence of the swelling of the glands by which the lacteal fluid is secreted. The nipple, also, becomes more prominent, and increases in diameter, while the areola around it assumes a purplish tinge, and has on it several little raised pimples of a yellowish-white colour; 4. Enlargement of the womb and abdomen, which, in the fourth month, becomes very perceptible; the womb, which may now be felt in a firm rounded body, having ascended above the bone of the pubes, and pushed the bowels up into the abdomen; 5. A tendency to flatulent distention of the stomach, towards evening especially, rendering insupportable a pressure of stays, &c., which in the morning could be easily borne; 6. "Quickening," which is the mother's first perception of the second life within her; there is at first, probably, a very slight tremulous motion, like a mere pulsation, this day by day grows stronger, until it becomes quite distinct, often painfully so; it is as though the child, to use a scripture phrase, "leaped in the womb;" these movements can be distinctly felt by the hand placed upon the abdomen. There are other and less obvious signs which only the professional man would be likely to detect; all may notice, however, the change

which generally takes place in the countenance; the mouth and eyes seem to enlarge, and the nose becomes, what is generally termed, more or less pinched up; there is an alteration, too, in the colour of the eyes, which become somewhat paler, especially is this perceptible if they are blue eyes. Then the patient is generally fidgetty, peevish, and restless, exhibiting a high degree of nervous irritation; she has odd fancies, and longings after out-of-the-way things, and articles of diet, which should be procured for her if possible. At such a time she requires soothing and humouring; harsh and unkind treatment will be likely to have a most injurious effect, both upon her and her offspring.

Touching the disorders to which Pregnant women are liable, local and general, we may observe, in addition to those already mentioned above, that a varicose condition of the veins of the legs, is one of the most common; it usually occurs during the latter months of Pregnancy, and arises from the pressure on the trunk veins on the pelvis. This is sometimes very painful and distressing, the veins becoming very dark coloured and swollen, and often permanently varicose, so that an elastic stocking, which is at first put on to afford temporary relief, has to be always worn.

Constipation during the latter months of Pregnancy is nearly always present, the pressure upon the lower bowel being the cause. Neither Aloes, nor any violent cathartic should be taken. A moderate dose of Castor Oil may be administered about every other day, or as often as necessary. (See *Constipation*), also *Piles*, which are often very troublesome to Pregnant women.

Puerperal Convulsions sometimes occur before delivery as well as after; they may partake of the character of *Apoplexy*, *Epilepsy*, or *Hysteria*, (all of which see.) Sometimes these are so violent as to cause death. (See *Convulsions*).

Cramp is also sometimes very violent and troublesome; it is confined to the lower limbs, and occasioned by the pressure of the enlarged womb upon the nerves; there is also often great irritability of the bladder, and violent headache.

Of *Abortion* and *Miscarriage* we have already treated under those heads. For an account of the affections to which women are especially subject after delivery (see *Breast*, *Lying-in*, *Milk*, *Parturition*), &c.

It will be well, perhaps, before quitting this subject, to lay down a few simple rules for general management during Pregnancy; and, for special treatment of the affections

which are likely then to occur. Montgomery says that "A Pregnant woman should be made aware that the advantages obtained by well-regulated habits are by no means exclusively conferred on her, but that others equally important are likewise conferred on the child, for whom a larger supply of nutrition, and of a better quality, will thus be provided; and so, being nourished by sound and healthy fluids, will commence its career of life strong, vigorous, and less liable to those morbid debilities and derangements which affect the children of the indolent, the pampered, or the debauched." The mother in expectancy should bear this in mind, and, not only for her own sake, but for that of the being in embryo, on whose future health and destiny she will exercise so great an influence, let her avoid all unnecessary causes of excitement, all undue fatigue and exposure to weather; let her lead a quiet, regular life; take good nourishing diet, but not rich and luxurious: it is a mistake to suppose that *more* food is required during pregnancy than at any other time; the stomach then partakes of the irritability of the whole system, and to overload it, as is frequently done, is sure to increase, if it does not cause, the sickness to which we have alluded as one of the symptoms of Pregnancy. Therefore, let the eating and drinking be moderate, and let moderation, too, be the rule in all the pleasures and enjoyments of the senses. No woman who is *eniente*, as the French term it, should, if she can possibly avoid it, witness a scene of deep distress, or acute suffering; or read or listen to any fearful and harrowing recital; her nervous system is in a state of extreme impressibility, and neither the feelings nor the imagination should be unnecessarily excited; if they are, the mind is likely at such a time to lose its balance, or a prejudicial effect may be produced on the child yet unborn. Neither should a Pregnant woman expose herself to contact with infectious diseases, even though they be such as she is not likely to take herself, for the infant in the womb may suffer from them; instances are on record of children born with small-pox. Frightful and disgusting objects, too, should be avoided, as they will be likely to excite fears of deformity in the child. For the sickness and vomiting before alluded to, it is well to take an effervescing draught every four hours or so, with perhaps $\frac{1}{2}$ a drop of Hydrocyanic Acid in each. The patient should have breakfast in bed, and remain in a recumbent position for some time after. Small lumps of ice put into the mouth, and allowed

to dissolve, will sometimes afford relief. If there is pain at the pit of the stomach, 2 or 3 Leeches, or a Blister, may be applied; if found serviceable, this may be repeated at intervals. Should the stomach reject all food, nutritive enemias of broth, or yolk of egg and milk, may serve to keep up the strength for a time.

For the costiveness which is common at this time we have already recommended Castor Oil as the very best aperient; but if the stomach nauseates at repeated doses of this, a mixture of Sulphate of Magnesia, 1 ounce, dissolved in Infusion of Roses, 6 ounces, with 2 ounces of Cinnamon Water, may be tried, a wineglassful every morning early. If, as is sometimes the case, diarrhoea supervenes, give Chalk Mixture 6 ounces, with Aromatic Confection 2 drachms, and Tincture of Opium $\frac{1}{2}$ a drachm, a table-spoonful every three or four hours. The frequent desire to make water, arising from irritation of the bladder, should be attended to, as long retention of urine may cause retroversion of the womb, and abortion: an abdominal belt will be found of great service in the renal affections of Pregnancy. Effervescing draughts, with 10 grains of Nitrate of Potash, and the same of Magnesia, will also be found serviceable: and if there is much pain, add 5 minims of Laudanum, and apply hot fomentations, or use the hip-bath. If there is cough, which frequently attends Pregnancy, give any soothing pectoral mixture, or the pills recommended under the head *Cough*.

If the cough is attended with pains in the chest, or headache, apply in the former case Mustard Poultices over the sternum, or Leeches, if the patient is of a full habit. For cramps and pains in the legs, with swelling and varicose veins, sponge the legs with cold Vinegar and Water, and put on roller bandages, or elastic stockings. Itching about the vagina, with gleet discharges, call for the use of the hip-bath, and a slightly astringent injection, such as Goulard Water, a weak solution of Alum, or an infusion of Green Tea. For heartburn, Carbonate of Potash and Magnesia, of each 10 grains, in Cinnamon Water, with 1 drachm of Tincture of Gentian. For dreams and restless nights, Extract of Hemlock, or Henbane, 5 grains, at bed-time, with strict attention to the condition of the bowels. Of convulsions we have already spoken. When these are frequent, and accompanied with giddiness and a sense of confusion, active depletory measures are called for, should the habit of the patient warrant this. Despondency frequently seizes upon those who are about

to become mothers; but generally, if the health be pretty good, it is shaken off as the great trial approaches. There are some women who are never so well and cheerful as during the time of Pregnancy, but many there are to whom it is indeed a period of trial and suffering; and especially is this the case with those who are about to become mothers for the first time.

It is necessary to the completeness of our subject that we say a few words here about False or Spurious Pregnancy. "A condition of the female system," says Montgomery, "of a remarkable kind, most frequently observed about the turn of life, when the catamenia becoming irregular, previous to their final cessation, are suppressed for a few periods, and at the same time the stomach being out of order, nausea or vomiting is experienced, the breasts enlarged, become sensible, or even slightly painful, and sometimes a serous or acrolactescent fluid exudes from the nipples and orifices of the areolar tubercles; the abdomen grows fuller and more prominent, especially in women of full habit, and constitutionally disposed to *embonpoint*, and the abdominal enlargement progressively increases, partly from deposition of fat in the integuments and in the omentum, but still more from distention of the intestines by flatus, which, passing from one part to another, communicates a sensation like that produced by the motion of a foetus; the nervous system is generally much disturbed, and the woman feels convinced that she is Pregnant, an idea which, at the time of life alluded to, is cherished by the sex with an extraordinary devotion, and relinquished with proportionate reluctance, and not unfrequently at the end of the supposed gestation, the delusion is rendered complete, and almost assumes the character of a reality, by the occurrence of periodical pains strongly resembling labour."

PRÆCORDIA (Latin *præ*, before, and *cordia*, the heart). The front part of the region of the thorax, or chest.

PREMATURE BIRTH. One which occurs between the 7th and 9th month of Pregnancy is generally so called; it is a contingency to be most carefully guarded against, for a child born before its regular time can scarcely be expected to have the strength and vigour of one who attains its full development in the womb. Nevertheless, cases have been known in which the early-born child has grown up hearty and strong, and there are also cases in which, for the mother's sake, a premature labour is desirable, as giving the only possible chance

of producing living offspring at all. There may be an unusually small pelvic cavity, owing to some malformation, or a narrowing of the passage through which the foetus has to pass, so that it can only do so by an operation, involving death to the child and great danger to the mother. Of course, none but a surgeon should be entrusted with the delicate task of bringing about a premature labour, and only such a sad necessity as is here hinted at should authorize him to attempt it.

PRESBYOPIA (Greek *presbys*, old, and *ops*, the eye). That is far-sightedness; a state of the eye sometimes observed in those of advanced age. It is the opposite of *Myopia* (which see).

PRESCRIPTION (Latin *prescribo*, to write before). The medical formula which the physician writes, when he has seen his patient, for the guidance of the apothecary who prepares the medicines, and labels them with the proper directions; it is written in Latin, and the words are much abbreviated, in some cases a single letter standing for a word: thus, *p. r. n.* for *pro re nata*, meaning, according to the occasion, or, as it is shortly translated, when required. A true man of science will compose his Prescription according to philosophical principles; there will be, 1st, the *Basis*, or chief acting ingredient; 2nd, the *Adjuvans*, that which assists and promotes its operation; 3rd, the *Corrigens*, that which regulates and corrects it; 4th, the *Constituens*, that which gives an agreeable colour or flavour; the objects to be kept in view being to enable the basis to operate *quickly, safely, and pleasantly*, or, as the learned would say, *citò, tutò, et jòcundè*.

The advantage of writing Prescriptions in Latin, has been much questioned; but to those who are best able to judge, this appears to be the better course: it is often very undesirable that patients should be made aware of the exact nature of the drugs which they are taking, as the strongest poisons, given under certain circumstances, and with proper safeguards, have often the most beneficial action on a disease:—indeed, they are sometimes the physician's only resource; and nervous people, unaware of the principles on which their administration is based, would be frightened at the idea of taking them. Then again, Latin is the universal language of science, and a Prescription written in this language, would be understood by all scientific men; a manifest advantage this, which becomes more and more apparent, as the great principles of medical treatment became simplified, and rendered

general. The Prescriptions of former days were very complicated affairs, judging by which we should imagine, that in very many cases, the prescribers could not make up their minds as to the proper course of treatment, and, therefore, threw in a great many drugs, in the hope that one or other of them would touch the disease; this hap-hazard mode of prescribing is now happily discarded, and our Prescriptions are generally plain and simple, containing but a few ingredients, and if written in a dead language, it is not with a view to mystify and delude people. Our doctors, now-a-days, are not alchemists, and jugglers, and mountebanks, as ignorant of true science as the Indian "medicine-man," although we still have amongst us quacks in plenty, who vend mysterious compounds, good for every disease under the sun, and suitable for all ages and constitutions. The physician who would practise successfully among any other than the lowest and most ignorant classes, must be a highly-educated and enlightened man, who proceeds on strictly scientific principles, and can give a reason for all that he does. It is sometimes thought that the fee expected by such, for a consultation and a few lines of writing merely, is most exorbitant; but the long and laborious study required to fit a man for giving medical advice which is really worth having, should be taken into consideration, the life-long devotion to the great object of alleviating pain and curing disease; the social position necessary to be maintained, and the harass of mind to which a really conscientious physician must be subjected. High medical skill and experience cannot be purchased like salts and senna, at so much per ounce; nor a carefully considered Prescription, like a mere manuscript copy of some printed form, which is patent to all; therefore we say to our readers, grudge not the physician's fee, but pay it readily, with the full assurance, in most cases, that you get the worth of your money.

PRESERVED PROVISIONS. The preparation of articles of nutriment, in a concentrated form, has of late been carried to great perfection; the knowledge that all our solid food is composed, to a great extent, of watery particles, and that this partial fluidity is the great cause of their rapid decomposition, naturally leads to the inference that if this water could be got rid of by compression, or otherwise, we might obtain a large amount of nutriment in a very small compass, and in a condition likely to keep good for a long time. This reasonable deduction is borne out by the fact, that by

means chiefly of dessication and compression, portable animal and vegetable food can be, and is produced, calculated to retain its nutritive properties, and characteristic flavour for years, and under varying climatic influences; the necessity of its remaining unchanged, being its exclusion from the air; this is best effected by means of sealed canisters, in which Preserved meats are generally sold: of course, we do not recommend Preserved Provisions in preference to fresh, which are always best; but we say to our readers who are going on a sea voyage, or into situations where food in a fresh state is not easily procurable, take as much of the former as your means and opportunities will allow. Preserved meat, if properly prepared, is very superior to salted meat; for, as Liebig has shown, much of the albumen of flesh is dissolved in the brine, and, therefore, in the process of salting, its composition is changed, and it is rendered less nutritious. Beside which, "A change in the gastric juice, and, consequent on that, of the products of the digestive process, must be regarded as an inevitable result of the long continued use of salted meat; and if during digestion the substances necessary to the transformation of this species of food be taken from other parts of the organism, these parts must lose their normal condition."

We can now obtain Extract of Beef, which is said to contain in 1 ounce the nutriment of a pound of the fresh meat. *Pemican* is the muscular fibre of Beef dried and reduced to a coarse powder; travellers speak highly of its value as an article of diet; as do chemists of the Patent Meat Biscuit, a preparation of concentrated meat and bread, one pound of which contains the nutriment of five pounds of beef, and which can be made into soup in a very short time. This and *Pemican* possess the advantage of keeping good even when exposed to the air. In a cubic foot of M. Massin's compressed vegetables, we are offered as much as would furnish rations for 10,000 men. When immersed in water for some time, they will "swell up, become soft and tender, and resume to a great extent, the appearance, colour, and flavour proper to them in a fresh state. Of the value of Preserved Fruits our readers are fully aware. Of the methods of preservation, it is rather for the cook and housewife than the *Family Doctor* to speak. He can but recommend them as generally wholesome, as far as the fruits themselves are so, and very useful; at least those preserved in sugar as jams and jellies, in the administration of medicines, and as

condiments, which, however, should be sparingly used, for those who have delicate appetites, and require temptations to make them eat.

PRESSURE as a curative agent has always been recognized as of considerable importance; it has been, and is, applied in cases of *Fracture* and *Dislocation* (which see), also in various distortions and inflammations to which the human frame is liable, such as those of the *Spine* and *Foot* (which see). We have a striking evidence, in the flattening of the skull of the Carib, and some other barbarous tribes, of the effect of continued Pressure on the growth of one of the hardest and most unyielding portions of the body, viz., the cranium; and our everyday surgical experience proves to us how crooked bones may become straight, and *vice versa*, if we only apply Pressure at the proper time, in the proper way, and keep up its application sufficiently long. In cases of tumours, and some other swellings, we resort to this agent with marked success; we apply it to stop the bleeding of a vein or artery; to close a wound, or keep in its place some internal organ, until nature shall have repaired an injury or remedied a defect, and so rendered it no longer necessary. What should we do in cases of hernia and prolapsus without Pressure—which has recently been recognized as one of the safest and most effectual applications in aneurism. Pressure—that of the atmosphere—is upon and around us wherever we go; by its equality on all sides, we are sustained and supported; by its resistance within to the opposing force without, we are preserved from being crushed, and collapsed like a wind-bag. We are sensible of the various atmospheric changes by the greater or less degree of Pressure which the air exerts upon us, and but for it we should fly off into space, and be altogether unable to guide our movements.

Then, too, Pressure is a cause of disease, as well as a curative agent: witness the white swelling, or Housemaid's knee; the sores and sloughing ulcers of the poor bedridden patient; the troublesome corns and bunions of foolish people, who will persist in thrusting their feet into shoes too small for them. And above all, witness the short breath, hysterical and other symptoms, of the genteel young lady, who makes a human wasp of herself, in more senses than one; for ill health sours the temper, as surely as the undue compression, of a part of the body containing the organs whose free action is most essential to life, destroys the health. Scarcely would our remarks on

Pressure be complete without an allusion to that of cares and adverse circumstances upon the mind, frequently leading to disease of those organs by which the mind chiefly acts, and, as a consequence, producing mental derangement, and often, by sympathetic action, bodily disease also. By brooding too much upon our troubles, this Pressure is perpetuated and intensified, and efforts should be made to obtain at least occasional relief by such innocent pleasures and recreations as are available. Thus the elasticity of the mind is restored, and it is enabled to struggle, with a better chance of success, against the incubus which oppresses it.

We should not leave this subject without a solemn warning to mothers as to the injurious effect of undue Pressure upon the young; tight stays, tight shoes, tight everything, should be avoided, even tight discipline. Let the feelings, as well as the limbs, have free play, and we shall have less morbid growths, and diseases, both mental and physical.

PRIMÆ VIÆ (Latin, plural of chief way). Applied to the first passages of the stomach and intestinal tubes, as distinguished from the *secunda viæ*, or second passages.

PROBANG. A long slender piece of whalebone, with a sponge at the end, used for passing into the œsophagus, for the purpose of examination, or removing any obstructions. For cut of this instrument, see p. 340, Vol. I., *Gullet*.

PROBE (Latin *probo*, to try). An instrument by which the depth and extent of wounds are tried; it has a blunt end, and is best made of silver. By means of a Probe the surgeon ascertains the extent of destruction of tissue in an abscess, and how deep he must cut to make a free opening for the escape of matter. Some Probes have a groove, or channel, as a guide for the operating knife. The Probe, in unskilful hands, may cause much mischief, irritating and inflaming tender parts; it should therefore be left for the professional man to use.

PROCESS (Latin *procedo*, to issue forth). The eminence of a bone, or the thick part, from which the shaft issues, is so called: thus, in the leg we have the spinous Process of the tibia, and in the arm the olecranon and coronoid Processes of the ulna.

PROCIDENTIA (Latin *pro* before, and *cedo* to fall). The falling of any part, as the anus, uterus, &c. See *Prolapsus*.

PROFLUVIA (Latin *profluvio*, to flow down). The name given by Cullen, in his Nosology, to an order of *Pyrexia* (which see).

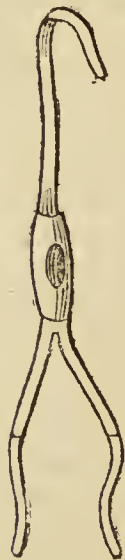
PROGNOSCIS (Greek for foreknowing).

faculty of foreseeing and predicting what will take place in the course of a disease; the art of discerning present symptoms, and from thence deducing the character of disease, is *Diagnosis* (which see).

PROLAPSUS (Latin *pro labor* to fall forward) signifies the same as *Procidentia* (see above). *Prolapsus ani* and *uteri* (of the anus and the womb) are by no means uncommon affections in females, especially who have borne children, and had difficult labours. Cold astringent lotions, and the use of the Pessary are among the remedial means to be adopted. See *Anus*, *Pessary*, *Womb*.

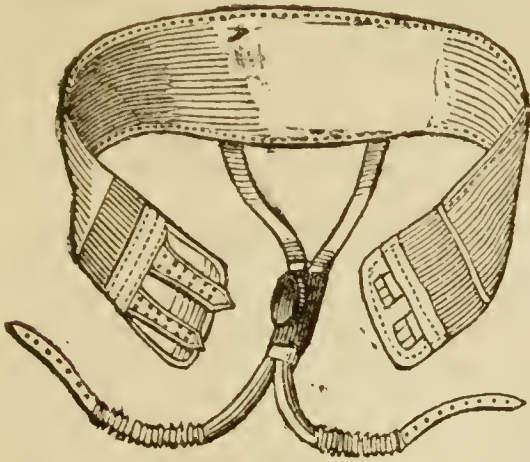
Prolapsus of the lower gut at the fundament most frequently occurs with children and aged persons, although it does occur at all ages, and commonly in connection with *Piles* (which see); irritation from worms or stone in the bladder, or much straining at motions of the bowels, will also occasion it. The gut may generally be returned without difficulty by means of gentle pressure with the fingers, covered with a piece of greased rag. If allowed to remain down long, it will become swollen, with congested blood, and will require the aid of a surgeon, who should always be consulted if this Prolapsus becomes habitual, in order that the cause of it may be investigated, and if possible removed. Children so effected should have their bowels kept in a lax state with gentle aperients, and they should not be suffered to remain long on the stool; the loins should also be bathed with cold water, and an enema, consisting of a grain of Sulphate of Iron, dissolved in an ounce of Rain Water, should be thrown into the bowels after each motion.

For this kind of Prolapsus, whether in children or grown persons, a Pessary is seldom necessary, but a bandage like this may be used with advantage:—Here we have a centre piece, tolerably broad, to which is attached an oval pad of some smooth hard material; a back-strap passes up, and fastens to a belt round the body; and another strap, in two divisions goes up the front, and also fastens to the belt. This, if properly managed, will exert all the pressure necessary to keep the gut from protruding. The following is a more complicated and expensive, as it is also a more useful instrument of the kind.



The broad belt serving as an abdominal supporter: it is applicable to all cases of Pro-

lapsus Ani, whether it proceeds from Piles or any other cause.



PROMONTORIUM. Latin for a promontory. Applied to an eminence of the internal ear, formed by the outer side of the vestibule, and by the corresponding scala of the cochlea. See *Ear*.

PRONATOR (Latin *pronus*, bending forward). The name of two muscles called *P. teres* and *P. quadratus*, the first of which arises from the inner condyle of the humerus, and the coronoid process of the ulna, and is inserted into the middle of the radius; and the second arises from the edge of the ulna, and is inserted into the edge of the radius: these muscles turn the radius and the arm inward. See *Fore Arm*.

PRONATUS (Latin *pronus*, bending downward). The act of turning the palm of the hand downwards, by rotating the radius upon the ulna by means of the pronator muscles.

PROOF SPIRIT. Spirit of Wine, which has been tested, and found to be of the proper strength. See *Alcohol, Spirit*.

PROPHYLACTIC. Greek *pro*, before, and *phylasso*, to guard). Any means employed for the preservation of health; but more especially a medicine which is intended to act as a preventive to, or a defence against, disease.

PROPOLIS (Greek *pro*, before, and *polis*, a city). A reddish odoriferous substance, gathered by bees, the vapour of which has been used in asthma, &c.

PROSTRATE (Latin *pro*, before, and *sto*, to stand). A gland situated before the *vesiculæ seminales*; it is about the size and shape of a chestnut, and surrounds the neck of the male bladder; in young men it is liable to become the seat of scrofulous inflammation, and in old, of chronic enlargement; the symptoms of both these forms of disease are too obscure to admit of domestic treatment.

Prostrate Concretions, or Calculi of the

Prostrate Gland, are, as Dr. Woollaston has shown, chiefly Phosphate of Lime, distinctly stratified, and tinged by the secretion of the gland. See *Calculi*.

PROTEIN (Greek *proteyo*, to take a first place). A name given to the supposed base of the animal principles, albumen, fibrin, and casein, from which, according to Liebig, all the organic nitrogenized constituents of the body are derived. This substance is in the form of a yellowish brittle mass, insoluble in water and alcohol, and has been obtained from both animal and vegetable albumen; it is said to be composed of carbon, hydrogen, nitrogen, and oxygen; it does not occur in nature in the state of Protein, and some chemists have doubted of its existence at all.

PROTO (is from the Greek *protos*, the first). It denotes the manner in which one body unites with another, as *Per* denotes the highest degree.

PROTRACTOR. (Latin *protraho*, to draw forward). An instrument for drawing extraneous bodies out of a wound.

PROTRUSION (Latin *pro*, and *trudo*, to thrust). The act of thrusting forward or driving beyond the usual limit; thus various parts of the body may be protruded either by natural or artificial openings. See *Pro-lapsus, Rupture, &c*.

PROUD FLESH. A name applied to the red granulations which often appear on the surface of wounds and ulcers; if they do not rise above the level of the skin, these granulations are of a healthy character, being part of the process by which nature is replacing the lost material, and filling up the void which its loss has occasioned; it is manifestly, therefore, unwise to interfere with them; but if they do rise above the level of the skin, they are most likely of a fungous character, and their destruction should be attempted by means of a caustic application; it may be the Nitrate of Silver itself; or Sulphate of Copper (Blue Stone); a few grains of Red Precipitate, or a little powdered Lump Sugar; the first-named of the above is the most effectual, but care should be taken, in applying it, only to touch the spots themselves. See *Abscesses, Ulcers, Wounds*.

PROXIMATE CAUSE. We call by this name the more immediate traceable cause of any disease, such as the eruption of acrid bile in excess into the stomach and bowels. The *Remote Cause* is that which gives origin to this superabundance of bile.

PRUNES. The dried fruit of the plum, or *Prunus Domestica*, of the natural order *Rosacæ*; they are laxative and nutritious.

and stewed in water make a good article of diet in cases of costiveness, especially for the convalescent from fevers and inflammatory diseases. They impart their laxative



properties to water, and are a pleasant and useful addition to purgative infusions and decoctions. If eaten too largely by those whose digestive organs are not very good, they are likely to cause much pain and griping.

PRURIGO (Latin *prurio*, to itch). A papulous affection of the skin, attended with troublesome itching. Bateman divided it into four species—viz.: 1st, *P. formicans* (Latin *formica*, an ant), which is attended with a sensation as of ants or other insects creeping over and stinging the skin, or of hot needles piercing it; 2nd, *P. mitis*; 3rd, *P. senilis*; 4th, *P. sine papulis*—Mild, Inveterate, and Local Prurigo; the last being divided into several varieties, according to the parts which are affected. This disease, although not dangerous, is a cause of great discomfort, and sometimes even misery; it attacks persons of all ages, and is not easily got rid of, sometimes lasting for months, and even years. See *Skin Disease*.

PRUSSIATES. The former name of the *Ferro-cyanites*, or salts of the Ferro-cyanic acid. The Prussian Blue, so useful in the fine arts, is a Ferro-cyanite of the Peroxide of Iron.

PRUSSIC ACID. An acid discovered by Scheele, and so called from being an ingredient in the Prussian Blue; it is now generally called *Hydrocyanic Acid* (which see, and *Acids*.)

PSALTERIUM. (Greek *psalto*, to play upon the harp). Applied to a part of the brain consisting of lines like harp-strings impressed upon the under surfaces of the posterior part of the body of the *Brain* (which see).

PSEILISMUS (Greek *psellys*, stammering). Misenunciation, or inaccurate articulation. See *Stammering*.

PSEUDO-BLEPSIS (Greek *pseudos*, false, and *blepo*, to see). False or deformed sight; defective vision, causing the appearance of imaginary objects. See *Sight*.

PSEUDO-SYPHILIS (Greek *pseudo*, and *sypilis*, venereal disease). A name applied to a form of disease, in which the symptoms are very similar to those of syphilis, although there is no venereal taint in the case.

PSOAS (Greek *psoi*, the loins). From this root we have the names given to two muscles of the loins—viz., *P. magnus* and *P. parvus*, the first of which moves the thigh forward, and the second bends the spine upon the pelvis.

A *Psoal Abscess* is one which originates in the loins; it is of a scrofulous nature, and arises from inflammation of the spinal bones, or of the cellular membrane; it generally runs deep, the matter passing downwards behind the abdomen, and showing itself in the groin as a fluctuating tumour. See *Lumbar Abscess*, and *Spine*.

PSORA, Greek for the *Itch* (which see). From the same root we get

PSORIASIS. A skin disease, of the order *Squamæ*, sometimes called Dry Scall, or Scaly Tetter; it consists of patches of dry amorphous scales, continuous, or of intermediate outline, often resembling what is popularly called a chapped skin. According to Bateman, there are five species of this disease, viz., *P. guttata*, *P. diffusa*, *P. gyrata*, *P. inveterata*, and *P. localis*—Minute, Spreading, Gyrated, Inveterate, and Local Dry Scall; of the latter there are several varieties, named according to the parts affected. See *Skin Disease*.

PSOROPHTHALMIA is inflammation of the eyelids with ulcerations; sometimes called *Tinea*, or Itch of the Eyelids.

PSYCHOTRIA. The name of a genus of plants, the roots of some of which, as *P. Emetica* and *P. Herbacea*, are used as substitutes for Ipecacuanha; they belong to the natural order *Rubiaceæ*.

PSYDRACIUM. (Greek, *psydrakia*, signifying cold). A small pustule, often irregularly circumscribed, producing but a slight elevation of the cuticle, and termi-

nating in a lamellated scab. Compare *Phlyzadium*. See *Skin Diseases*.

PTEROCARPUS. (Greek *pteros*, a wing.) The name of a genus of plants of the order of *Leguminosæ*, some species of which are medicinal; among them are *P. Erinacea* and *P. Draco*, the former producing *Kino* and the latter *Gum Dragon* (both of which see.)

PTERYGIUM (Greek, *pteros*). A thickened state of the conjunctiva, probably so called from its triangular shape; its varieties are *P. tenue*, *P. crassum*, and *P. pingue*—Thin, Thick, and Fatty Pterygeum.

PTERYGOIDEUS (Greek *pteros* and *eidōs*, likeness). Like a wing; a name given to a process of the sphenoid bone. Hence we have *P. internus* and *P. externus*, two muscles which move the jaw from side to side, and perform the action of grinding with the teeth. See *Jaw*.

PTERYGO-STAPHYLINI (Greek, *pteros* and *staphyle*, a bunch of grapes). The name of a cluster of muscles arising from the pterygoid process of the sphenoid bone, and inserted into the uvula.

PTILOISIS. (Greek for the moulting of birds). Applied to the loss of the eyelashes.

PTISAN (Greek *ptisso*, to pound or peel). This term has been applied to decoctions of pearl-barley, or barley-broth, in relation to the process of grinding in a mill which the grain previously undergoes. (See *Barley*, *Gruel*.) Ptisan Drinks are mentioned by ancient writers; thus Horace speaks of *Ptisanarum Oryzæ*, or Ptisan Drink of Rice. We now apply the term to any vegetable infusion, or decoction, of a mucilaginous character, which may be drunk freely by the sick. In the medical practice of France, Ptisans are much more extensively used than they are with us. See *Demulcents*.

PTOSIS. (Greek for *prolapsus*). A falling of the upper eyelid, with a partial or complete want of power to elevate it. Beer terms it *Atonic palpebrarum*.

PTYALISM (Greek *ptyo*, to spit). Salivation, leading to an involuntary flow of saliva. This is an effect produced on the salivary glands by mercury, iodine, and some other substances, by which the flow of saliva is greatly increased in quantity, and rendered more glutinous in quality. The Ptyalism of mercury is the most marked in its character and symptoms, the chief of which are enlargement of the glands to such an extent that it is frequently very painful to open the mouth; the mucous membrane of the throat is much inflamed, and there is

often ulceration to a great extent. One of the symptoms is the peculiar odour of the breath (see *Salivation*): medicines that cause which are termed *Ptyalogues*.

PUBERTY (Latin *pubis*, covered with hair). The age at which, in man, the chin generally begins to show symptoms of growing hair. It is the vigour of youth, the stage or epoch of life between childhood and man or womanhood. In the male, Puberty is entered on about the fourteenth year, in the female two years later; but this varies considerably according to climate and constitution. This is a critical period in the health of every individual; one in which the changes and excitements undergone will be likely to call into activity any latent tendencies to disease there may be in the system. The health of young people should therefore at this time be carefully watched, and all suspicious symptoms investigated.

From *pubes* comes also the term *Pubis os*, the Pubic or share bone, a part of the *os innominata*. See *Pelvis*.

PUDENDUM (Latin *pudor*, shame), plural *pudenda*. The parts of generation in the female. Hence also the term *Pudic*, applied to a branch of the sciatic nerve.

PUDDINGS when properly made of some farinaceous material, well and carefully cooked, are good articles of diet for invalids: no greasy ingredient should be admitted, nor must the sauce of any be of a fatty nature like butter. Simple Rice, Sago, Tapioca, and boiled Bread Puddings, are those best suited for the sick room, or a composition of light egg and flour. To make them very nutritious, and at the same time light, it is best first to bake or boil the farinaceous ingredient thoroughly in milk, and while it is hot to stir in the egg, previously beaten up with a little warm milk; then set aside to cool; the egg is thus sufficiently cooked, without having its albumen hardened and rendered indigestible. Scarcely is it necessary for us to give receipts for invalid Puddings, the thrifty housewife will have them at her fingers ends, and if not, "the Wife's Own Book of Cookery," or some other cheap manual of the kind, will furnish her with plenty.

PUERPERAL FEVER (Latin *puer* a boy, and *pario* to bring forth). This is one of the most fatal diseases which attack lying-in women; it is a fever of a very high character, arising from inflammation of the serous membrane, and often of the womb itself, and of its veins and absorbents; it runs a very rapid course, and is commonly fatal. It assumes the character of an epidemic, and frequently causes great mortality

in lying-in hospitals; whether it is really contagious or not is yet an open question. The circumstance that it has been known in several instances to attack the patients of one medical man, while all others in the locality have remained free, seems to favour the impression that it is. The mere probability that it may be so should render persons extremely cautious in their intercourse with those who are suffering under it. This is sometimes called *Puerperal Peritonitis*, because the peritoneum appears to be its chief seat; great tenderness of the abdomen, with fulness and tension, is one of its most constant and characteristic symptoms; there is also usually an anxious countenance, sickness, hurried respiration, a furred tongue, and a stoppage of the secretions, especially of the milk. When these symptoms occur soon after childbirth, no attempt should be made at domestic treatment; let the medical man be summoned immediately, if he be not in attendance. If the patient is able to bear it, he will probably bleed and leech pretty freely, and give a full dose of Calomel, followed by Castor Oil, and employ other depletive measures, to reduce the inflammatory action; this active treatment will be followed up with Calomel and Opium in grain doses, should the pain and inflammatory symptoms continue. It is often difficult to distinguish between this fever and true peritonitis, and only one skilled in the diagnosis of disease would be likely to treat it properly.

Of *Puerperal Convulsions* we have already spoken, under the head of *Pregnancy*; they sometimes come on after labour has commenced, or immediately on its completion; and, therefore, while the patient is in a state of great suffering and prostration; the hysterical form is most easily dealt with, merely dash a little Cold Water in the face, and give a teaspoonful of Sal Volatile in Water, as in common *Hysteria* (which see). The epileptic and apoplectic forms are both extremely dangerous; blood will have to be taken either from the arm or the temporal artery, and strong Mercurial Purgatives administered; the hair must be cut short, and a blister applied to the nape of the neck, and cold lotions to the head; if by these means the convulsions can be subdued; and the delivery, if it has not taken place, be accomplished, there may be a chance for the patient. Care must be taken in the apoplectic form not to give Opium, which will probably be required in the epileptic. Generally, however, a medical man will be present at such a crisis, if not, let him be summoned instantly.

Puerperal Mania seldom requires depletion by blood-letting from the arm; but leeches should be applied to the temples, blisters to the back of the neck, and cold lotions to the head, from which the hair should be cut off short: Mercurial Purgatives, as above directed, will be proper in this case.

PUGILLUS (Latin dim of *pugnis*, a fist). Sometimes put in prescriptions for a little handful, or the eighth part of a handful, about the quantity that can be held at a gripe between the finger and thumb.

PULEGIUM, Latin for *Pennyroyal* (which see). The North Americans much esteem, a plant whose scientific name is *Hedeoma Pulegioides*, as an emmenagogue.

PULMONARY (Latin *pulmonis*, the lungs). Disease whose seat or origin is the Lungs, as *Pulmonary apoplexy*, *P. consumption*, &c.: particulars of these forms of disease will be found under their respective heads (see also *Lungs*). The aqueous vapour which escapes in breathing, is called *Pulmonary transpiration*.

PULSE (Latin *pulsus*, a stroke). The stroke or beat of an artery, called by the Greeks *sphalmos*. This is simultaneous, or nearly so, with the contraction which takes place when the heart pours out a wave of blood through the arteries, the character of the pulsation being greatly influenced by the elasticity and muscular properties of these tubes. As the heart is the great central organ of circulation, and sympathizes with all the changes which take place in the system at large, it follows that the Pulse must be an important guide to those whose investigations are directed to the discovery of the ailments which cause functional and other derangements. But the information afforded by the beating of the Pulse is only trustworthy when it is carefully considered and weighed in connection with modifying circumstances. One ignorant of these, might as well consult an oracle whose response to his questions is couched in unknown and enigmatical words, as the Pulse. It follows, then, that a large amount of practical experience in the treatment of disease is necessary to the proper understanding of this indicator of the state of the system; the matter would be very simple if the mere frequency of the beats was an unvarying indication of this; but, in many cases, this is of far less importance to the medical man, than what he terms the rhythm, or tone. It may be full, bounding, or jerking; soft, wiry, or compressible; feeble, remittent, or intermittent; and all these in a greater or less degree.

True it is that, as a general rule, where there is a full bounding Pulse, measures of depletion may be safely adopted; where there is a thin and feeble one, these would not be safe. This is about as far as the non-professional inquirer may venture; it is well, however, for all persons who hold responsible situations, as heads of families, clergymen in country parishes, and especially such as are likely to go into partially settled countries, where medical advice may be difficult of attainment, to make themselves as well acquainted as they can with the language, so to speak, of the Pulse, which at all times may be easily felt by the fore and middle fingers, pressed slightly on the upper and inner side of the wrist, about an inch above the lower joint of the thumb, where the pulsating artery lies, guarded by the strong tendon of the fore arm (see *Artery*). The beats may there be distinctly counted, and a little practice will render the detection of any irregularity, or difference of force easy. With a healthy man in the prime of life, there will be about 72 beats in the minute; that is, supposing him to be quiet, and unexcited. Any great bodily exertion, or mental emotion, will render the Pulse more rapid. With children, where there is great activity both of body and mind, the arterial action will be accelerated. We give the above as a general average; with some persons the beats rise to 90 in a minute, and even more, and with others they sink to 40; and these variations are quite compatible with good health. Age has a great influence in the frequency of the Pulse. M. Quetelet gives the following as a scale of averages:—At birth, 136 per minute; at 5 years old, 88; at from 10 to 15 years, 78; at from 15 to 25 years, 69; at from 25 to 30 years, 71; at from 30 to 56 years, 70. We should have liked the investigation to have been carried further into the vale of years, as we fancy it would have tended to disprove a popular belief that the Pulse of aged persons is slower than that of the young; our experience does not confirm this.

PUNCTUM (Latin *pungo*, to prick). A point; hence *Puncta lachrymalis*, the external commencements of the lachrymal ducts, which terminate in the lachrymal sac.

PUPIL (Latin *pupilla*, dim. of *pupa*, a puppet). The round aperture of the iris of the *Eye* (which see).

PURGATIVES (Latin *purgo*, to cleanse). Active cathartics; substances which excite and accelerate the muscular movements of the alimentary canal, and increase the dis-

charge therefrom. Medicines of this class, which we often call *Aperients*, or *Cathartics* (which see), may be classed according to their action; thus they may be mildly *Laxative*, as Almond, or Olive Oil, Manna, Magnesia, &c.; *Purgative*, as Aloes, Castor Oil, Epsom and Glauber's Salts, Jalap, Rhubarb, Rochelle Salt, and Senna; and the mercurials, Blue Pill, Calomel, and Grey Powder; or *Cathartic*, or *Drastic*, as Colocynth, Scammony, &c.

Purgatives are the most commonly used, as they are undoubtedly the most serviceable, of any class of medicines; they not only clear the bowels of their contents, and so relieve that part of the system, but they are important agents in the relief of the organs closely connected with the bowels, such as the Liver, and also of the more distant parts, as well as the system generally; thus, how often do we find that a severe headache passes off under the influence of an active Purgative; and that many other painful and distressing symptoms are greatly mitigated, if not altogether subdued, by the like influence. Yet Purgatives, like all good things, are often abused; if taken too frequently and indiscriminately, they do much mischief, by weakening, instead of aiding, the digestive powers.

PURGING FLAX. The *Linum Catharticum* of botanists. For an account of properties, &c., and a cut of the plant, (see *Linseed*.)

PURL. A beverage made by the infusion of Absinthe, or common Wormwood, in Ale; it is a good tonic. See *Wormwood*.

PURPURA (Greek *porphyra*, purple). Literally, the Purple or Livid disease. An eruption of small distinct specks and patches of a dark blue or livid colour, caused by the escape of the blood from the smaller or capillary vessels, generally showing itself first in the legs, and afterwards, if the attack be severe, spreading itself over the body, and changing to a brown or greenish yellow. In some cases there is a discharge of blood from the mucous membrane of the nose, mouth, stomach, and internal viscera, and this is likely to have a fatal termination. Purpura often occurs in connection with measles, small pox, and other forms of eruptive fevers; most frequently it is a disease of debility, and requires a generous line of treatment; animal Broths, Wine, Porter, &c., should be given, with tonics and stimulants; one of the best remedies is Turpentine, given 3 times a day, in 10 or 15 drop doses. Sometimes, however, it attacks persons of a full and vigorous habit; then lowering measures, and perhaps bleeding, will be called for. Some

consider this disease as a species of scurvy; Bateman is one of these, and he divides it into five classes—viz.: *P. simplex*, *P. hæmorrhagica*, *P. urticans*, *P. senilis*, *P. contagiosa*; that is, Petechial, Land, Nettle-rash, Old Age, and Contagious Scurvy. (See *Skin Disease*).

PURPURIC ACID. This acid is obtained from Uric and Lithic Acid; it is remarkable for its tendency to form red or purple-coloured salts, with alkaline bases.

PURSINESS (*pursy*, from *poussif*, French.) A common term for obesity in short persons.

PUS (Greek, *pyon*). The fluid formed on the process of suppuration. It is a white or yellowish matter found in abscesses, and on the surfaces of what are called healthy sores; it is specifically heavier than water, and under the microscope appears composed of transparent globules, floating in a colourless fluid. Healthy Pus is in consistence and colour much like cream, and it exhales a faint sickly odour; but it is frequently thin and serous, or flaky, bloody, or foetid, according as it constitutes a purulent discharge, or a purulent effusion; or is of scrofulous, or other origin. Pus differs from lymph in not being capable of organization, or, as the physiologist would say, it is a plastic material. When poured out into the substance of an organ, especially if it be of a spongy texture, it becomes "hepatized," or made like liver. This is a common result of inflammation of the lungs. Very commonly, when Pus is found in the cavities of an organ, there is a deposit of fibrine in the shape of lymph, which confines the Pus within certain limits, and prevents its infiltrating into the surrounding tissues, and this constitutes what is commonly called an *Abscess* (which see). But when Pus is thrown out on a surface, as of a wound, the tissue has previously closed, and become separated, leaving a vacuity, which we call an *Ulcer* (which see). If the process of destruction extends, it is what is called a *Sloughing Ulcer*; but, on the contrary, if the fibrin thrown out becomes partly organized, forming little red masses, which are termed granulations, it is a *Healthy Ulcer*. (See *Inflammation*, *Proud Flesh*, *Sloughing*, &c.)

PUSTULES are elevations of the cuticle of circumscribed extent, containing pus; they are conical in shape, and sometimes commence as a vesicle filled with transparent lymph, which afterwards becomes purulent, and constitutes a Pustule. This is the case with the Cow and Small Pox eruptions.

Under the several heads of *Acne*, *Ecthyma*, *Impetigo*, and *Porriago*, &c., will be found

accounts of the pustular eruptions to which man is liable. Some include Boils and Carbuncles in the list, which undoubtedly at first arise from slough of the true skin. To a common phlegmon, differing from a boil or furunculus in containing uniform and mature Pus, the term *Push* has been applied. According to Bateman, Pustules are classed under four heads, viz., *Phlyzacium*, *Psydracium*, *Achor*, and *Favus*, the meaning of which term it is scarcely necessary for us to explain. (See *Skin Diseases*.)

PUTREFACTION (Latin *putris*, putrid, and *facio*, to make). A spontaneous decomposition of animal or vegetable matter attended with foetor. It is a kind of fermentation, during the process of which gases of a noxious nature are evolved. "The proximate cause of these changes which occur in organized bodies after death," says Leibeg, "is the action of the oxygen of the air on many of their constituents. This action only takes place when water, that is moisture, is present, and requires a certain temperature. This influence of atmospheric oxygen is very distinctly seen in fruits and other soft parts of vegetables, when, by an injury to their surface, the juice comes into direct contact with the air. When an apple is bruised at one point, a process of decomposition begins from the injured part. A brown spot appears, which increases in a regular concentric circle, till at last the whole apple becomes rotten, or is changed into a brown soft viscid mass. * * * * In like manner a process of decomposition sets in after death in the bodies of men and animals, which begins in the inside, in those parts—such as the lungs—which are in contact with the air. When there are wounds, it spreads from them; and in diseases, from the diseased part; so that, in many cases, death itself is nothing else than the result of a decomposition going on in an inward part. With the disease of which it is the prime cause the process begins, and it continues after death."

Much more might we quote from this authority to show that by this process of putrefactive fermentation the original elements of organized matter are liberated, and return to the air, or the soil from whence they were derived, to enter into new combinations, and form other vegetable and animal structures, as the case may be, and thus "the elements of the bodies of a former generation pass into, and become part of our own frames." All this is very curious and interesting, and it is also most important on account of its close connection with the origin and propagation of disease.

It is a well-established fact, that animal matter, in a certain state of decomposition, is capable of exciting a morbid action in the body of healthy individuals, hence the danger of dissecting, or operating on, bodies or parts in which there is putrescent matter, if there is a cut or scratch on the skin of the operator. It is equally well established that gases which are the result of Putrefaction, whether of animal or vegetable matter, will set up disease in the person inhaling them, hence we have fevers as the result of malaria, and epidemics occasioned by breathing an atmosphere loaded with morbid particles; and contagious diseases, the origin and propagation of many of which must be attributed to the same prolific cause of sickness and death. With regard to a theory supported by some, that the Putrefaction of animal matter is produced by microscopic animalculæ, Liebig observes:—"To ascribe Putrefaction to the presence of animalculæ is as irrational as it would be to ascribe to the beetles, whose food is derived from animal excreta, or to the mites in cheese, the state of decomposition of the excreta or of the cheese. The presence of animalculæ, which are often found in prodigious numbers in putrefying matters, cannot in itself be considered wonderful, since these animals find there the conditions of their nutrition and development combined. It is quite certain, however, that on their presence Putrefaction is exceedingly accelerated. Their nutrition presupposes the consumption of particles of the putrefying body for their own development. Its more rapid destruction must be the necessary consequence."

It has been observed that the substances which arrest the process of Putrefaction in animal matter, are also those which destroy the communicability, or stay the propagation of contagious or miasms; thus, under the influence of empyreumatic bodies, such as Pyroligneous Acid, which powerfully opposes Putrefaction, and also of absorbents, such as Charcoal, the diseased action in malignant suppurating wounds is entirely changed; and Chlorides of Lime, Zinc, &c., which act as preservatives to animal matter, neutralize or destroy the poisonous emanations from those affected with contagious diseases. This goes to prove the truth of Liebig's argument, and show that Putrefaction is the remote, if not the proximate cause, of most, if not all, epidemic and contagious diseases.

PUTRID FEVER. A name given to *Typhus* (which see) for its unmistakable symptoms of putrescency. It has also been called

Spotted Fever, because it is attended with petechiæ, or flea-bite spots. The Spaniards term it *Tavardillo*, from *tavardo*, a spotted cloak.

PYLORUS. (Greek *pyle*, a gate, and *ora*, care). Literally a gate-keeper. The lower orifice of the stomach, guarding the entrance to the bowels; through the valves of this orifice no solids can, without great difficulty, pass into the duodenum. See *Œsophagus*.

PYRAMIDALIS. (Latin *pyramis*, a pyramid.) The name of a muscle arising from the pubes, and inserted into the linea alba, near half way between the pubes and umbilicus; it assists the *Rectus* (which see).

A slip of the occipito-frontalis muscle, which goes down over the nasal bones, and is fixed to the *compressor nasi*; it is called *P. nasi*.

A muscle which arises from the hollow of the sacrum, and is inserted into the cavity at the root of the trochanter major, is also sometimes called *Pyramidalis*; most commonly, however, it is termed *Pyriformis*, from the Latin *pyrus*, a pear, which fruit it is thought to resemble; its office is to move the thigh.

PYRETHRUM. A species of *Anthemis* whose root is used as a sialogogue, under the name of *Pellitory Root* (which see).

PYREXIA. (Greek *pyr*, fire). A term applied to fever; the doctrine of fever being called *Pyretology*.

PYROMETER (Greek, *pyr* and *metron*, a measure). An instrument invented by Mr. Wedgwood for measuring high temperatures. The dilation of bodies by heat forms the subject of that branch of science called *Pyrometry*.

PYROPHORUS. (Greek *pyr*, and *phoro*, to carry.) An artificial product which takes fire from exposure to the air; it is prepared from alum by calcination, with various inflammable substances. See *Homborg's Pyrophorus*.

PYROSIS. Pain in the epigastrium, accompanied with extreme heat and eructation of watery fluid. (See *Water Brash*.)

PYROLIGNEOUS ACID. Latin *lignum*, wood.) An acid obtained by distillation from wood (see *Acetic Acid*), by the distillation of which is produced an ethereal fluid, termed *Pyro-acetic Ether*. From the heating of Pyroligneous Acid in a close vessel is produced a peculiar spirituous liquor called *Pyroxylic Acid*, and by the decomposition by heat of Citric, Kinic, Mucic, and other Acids is produced *Pyrocitric*, *P. Kinic*, *P. Mucic Acids*.

PYROLA UMBELLATA. Ground Holly, or Winter Green, a plant of the natural order

Pyrolaceæ, celebrated in North America for its specific action on the urinary organs; it is taken in the form of infusion, made by pouring a pint of boiling water over 1 ounce of the dried plant; the dose is from 2 to 4 ounces.

PYRMONT WATERS derive their name from that of a village in Westphalia which has long been celebrated for its mineral spring. The water is a highly carbonaceous chalybeate, the iron contained in it being about the same as that in the Spa Water; the gas, however, is more than double in quantity, and there is a larger proportion of the earthy carbonates. See *Waters*.

QUACKERY. According to Johnson, a Quack is a boastful pretender to arts which he does not understand; one who proclaims his own medical ability in public places; or an artful tricking practitioner in physick." And this gives us a sufficiently clear definition of the art practised by such a pretender to medical knowledge. The advertising Quack of bygone times was a travelling mountebank, who, from a stage in some public place, vaunted the hidden virtues of his nostrums, and his own power to cure all diseases to which flesh is heir. Nostrum vendors of the present day do not so present themselves to a credulous public; as a rule, they keep behind the curtain, and flood the columns of the newspapers, and all other mediums of advertisement, with their mendacious statements of wonderful cures effected by their invaluable remedies. Never, perhaps, was Quackery so rampant and ubiquitous as in this so-called enlightened 19th century; it would almost seem as if people wished to be duped, so eagerly do they clutch at each new panacea introduced with a great flourish of puffery, and a cloud of lying witnesses in the shape of forged testimonials. So great is the consumption of "patent medicines," whose government stamp appears like a certification of marvellous efficacy—whose high price is almost looked upon as an evidence of occult virtue. Quackery is sometimes confounded with Empiricism; but there is this difference between them, the former either adopts a concealed mode of treatment, or pretends to be possessed of a remedy applicable to every form of disease, and every individual case; the latter is founded upon the principle that, as certain medicines are known to have cured certain diseases, it will be right and safe at all times, and under all circumstances to administer those remedies, whenever the diseases, against which they have been successfully employed, appear again. This is

empirical treatment; there is no theory in the matter; no calling into play the reasoning faculties, and arguing from the nice deductions of scientific research; a few recorded facts as to the results of the administration of particular medicines are all that the empiric requires; satisfied with these he goes boldly on, forgetting, if he ever knew, that diseases vary greatly in their course and action, according to age and other circumstances, and hence often utterly failing in a course of treatment which may be empirically right. An empiric, however, must be, to a certain extent, an instructed man, a Quack need not; he may be, and often is, utterly ignorant of the nature and real operation of his much-vaunted remedy, composed, as he would have the public believe, of rare and costly ingredients, and of universal efficacy. Nothing but unblushing effrontery is here required, and a carelessness of consequences that would be ludicrous were it not highly criminal.

Quack Medicines are so numerous that it would occupy a good part of our remaining space to give the formula of those only which have attained the most celebrity, to the exclusion of more valuable matter: some of the most widely advertised pills we have already given under the head of *Nostrums*; and other common Patent Medicines, such as Daffy's Elixir, Godfrey's Cordial, &c., will be found under their proper alphabetical heads. Dr. Paris, in his "Pharmacologia," has a tolerably complete list of these medicines, with the forms of preparation.

Dr. Letheby, in concluding a series of valuable articles on the mischievous effects of Quack Medicines, which he contributed to the *Family Friend* writes thus on Quack advertisements:—"If any of our readers have ever been the victims of Quackery, we venture to say that it was through the medium of a cunningly-devised advertisement; for this is at all times the great decoy of the Quack. He knows its power, for he can count its results by thousands; and he spares no pains to use it with advantage. He studies it as he would a science; and he pays as much attention to the skilful practice of it, as many do to the exercise of a noble art. Indeed, the cunning and ingenuity of the quack are ever on the alert to find new means of developing the resources of the all-powerful puff. At one time it comes forth in the shape of a learned lecturer, 'who, at the request and earnest solicitation of many friends to humanity, has condescended to

enlighten the world, by giving a course of six lectures on the entire principles of his system.' In the details of this course, everything is alluded to that can by any possibility excite the morbid feelings of those to whom the lectures are addressed; there are, for example, skeletons, drunkards' stomachs, diseased hearts, consumptive lungs, and other things of a like character; and not unfrequently, a hint is given that there is some probability of a sort of sparing-match between the lecturer and a real doctor, who has been invited to attend. This artifice has the effect of bringing together a large audience, and of producing to the lecturer very happy results.

"At another time, the puff appears in the form of an ingenious account of a new medicine, and of all the diseases which it will infallibly cure. These are generally enumerated in nearly the same order—the category beginning with flatulency, and ending with thoughts of self-destruction.

"To this is, generally, added a stereotyped account of the nature and effects of the medicine on the blood and humours. Morison is particularly apt at this: indeed, he may be called the founder of the *humorous puff*.

"The simplicity of this style is so exceedingly popular, that almost every new claimant for the honours and profits of quackery adopts it.

"Then, again, there is the *testimonial puff*, which has always been very successful as a decoy; and it wants but little management beyond that of keeping it up. Indeed, there are men who live by writing these puffs and selling them at so much per dozen. The styles of the various classes are always the same; and they may be subdivided into the *debauchée* puff, the *humanity* puff, the *sedentary* puff, and the *professional* puff.

The *puff professional* is always in the familiar style.

"Another sort of puff is that in which the advertiser abuses Quackery, and disclaims all connection with the unprincipled parties who thus impose on the credulity of their victims.

"Last of all comes the most vicious and abominable of all species of advertised quackery—that which is to be found in the bye-places of every considerable town. The announcements to which we refer profess to be an account of the practice of some duly qualified medical man, who will undertake to cure disease with certainty, with secrecy, and at a small charge. Many an unwary victim has been lured to the den of these impostors, by their specious announcements, and after having been almost ruined in

health and in pocket, has found himself for years afterwards the subject of the grossest extortion. That secret which the advertiser professed to keep, is a source of revenue to him, and we need not say how it is abused. We would warn the unwary from such dangers, as we would from the plague; and no language is severe enough to condemn the practices to which we refer.

"In conclusion, it must be manifest to our readers that the tricks of Quackery are at all times no other than the tricks of imposture. The idea of curing disease or of benefiting mankind has no place in the mind of the Quack; and even if it had, it is associated with too much ignorance to be of use. The one single object which he has in view is that of getting money by deception, and he cares not how it is accomplished, or at what cost it may be to the life and health of the community."

QUADRATUS. The name of two muscles, called *Q. lumborum* and *Q. femoris*; the first of which arises from the crest of the ilium, and is inserted into the last rib and the transverse processes of the four first lumbar vertebræ; and the second arises from the tuber ischii, and is inserted into the inter-trochanteral line; the former effects some of the movements of the loins, and the latter of the thigh.

QUARANTINE. Among the sanitary regulations which nations have agreed to observe in their intercourse with each other is that of performing Quarantine, which consists in travellers and passengers from a foreign clime remaining for a certain period in their ship, or a building appropriated to such a purpose, before being allowed to mix with the inhabitants of the place which they visit. The word comes from the Latin *quartus*, a fourth, and has reference to the period over which Quarantine originally extended, viz., forty days. This regulation is only enforced on persons coming from places in which malignant, contagious, or infectious diseases may be prevalent, and in cases of ships which have not what is called a clean bill of health, that is, a certification that they are free from any such diseases. It rests with the officers who are appointed for this special service to determine what shall be the term of isolation, which is often less than forty days, sometimes five, ten, or twenty, as the case may require; the law has reference to goods as well as persons; the building to which they are removed is called a Lazzaretto.

QUARTAN AGUE. A kind of intermittent fever, the paroxysms of which generally occur every fourth day.

QUASSIA. The wood of two species of plants belonging to the natural order, *Simarubaceæ*, is so called, after Quassi, Coissi or Quass, a negro of Surinam, who first discovered its tonic and febrifuge properties, and used it as a cure for the malignant fevers so prevalent in moist, tropical countries; the species which he used was the *Quassia Amara*, a small branching tree growing to the height of 16 or 20 feet, a native of the woods of Surinam, Guiana, Cayenne and Trinidad; but that which is now generally employed, because it is more plentiful, is a lofty tree called in the Caribbee islands, Bitter Ash; it is the *Simaruba*



Excelsa of botanists. Quassia is purely tonic, invigorating the digestive organs with little excitement of the circulation, or increase of animal heat; it has an intensely bitter taste, but no perceptible odour. Its virtue depends upon a bitter crystallizable principle, which has been called *Quassin*: when heated it melts like resin; both alkalis and acids increase its solubility in water. A strong decoction of Quassia is a good poison for flies, which would seem to be a proof that it has narcotic properties; it is said that brewers sometimes used the wood as a substitute for hops. The Infusion of the Quassia of the Pharmacopœia is made by pouring a pint of boiling water on 2 scruples of the chips or raspings; it is given as a tonic and antiseptic, in bilious fevers, united with Alkaline Salts; in gout, with Aromatics and Ginger; in hysteria, with Camphor and Tincture of Valerian; in dyspepsia, with Sulphate of Zinc or Iron, or with mineral acids; the dose is from 1 ounce to 4 ounces.

QUERCUS (Latin for an oak). The name

of a genus of trees of the order *Cupuliferæ*, to which belong the Dyer's Oak (*Q. Infectoria*), the species which yields the galls of commerce, (see *Galls*): the Common White Oak (*Q. Pedunculata*), the bark of which is employed medicinally chiefly as a local astringent, (see *Oak*); the Cork Oak (*Q. Suber*), the bark of which is the cork so useful for a variety of purposes; this contains a peculiar principle called *Suberin*, which in combination with nitric acid forms *Suberic Acid*. There is also the Black Oak (*Q. Tinctoria*), the bark of which is largely imported into this country from the United States; under the name of *Querciton*, it is employed as a yellow dye. Several other species might be mentioned of this important genus, but they are not medicinal plants, and therefore foreign to our subject.

QUICKENING. The motion of the fœtus in the womb, felt about the sixth month of *Pregnancy* (which see).

QUICK LIME. The hot recently burnt *Lime* (which see).

QUICKSILVER, that is living silver, (in Latin *argentum vivum*), so called from its fluidity. This is a metal found both native, and in the state of ore, in mines in various parts of the world: next to gold, platinum, and tungstein, it is the heaviest of all the metals, and is so remarkably fusible as to be congealed only at a temperature of 39° or 40° below zero; hence its great utility in the manufacture of barometers and other indicators of changes of temperature, &c. But it is with Quicksilver, or Mercury, as a medicinal agent that we are now chiefly concerned, and as such its importance can hardly be overrated: in a pure state, if used at all, it is entirely as a mechanical agent in obstructions of the bowels, under the impression that its mere weight will force a passage. The compounds of this metal are alterative, anthelmintic, anti-phlogistic, anti-syphilitic, cathartic, and deobstruent. They are all of them, except, perhaps, the sulphurets, capable of inducing a state of mercurialism, of which the prominent symptom is *Salivation* (which see); therefore, their action should be carefully watched. Some of the preparations are corrosive poisons, and all of them may do serious mischief if incautiously used.

Preparations of Quicksilver directly promote the secretion of the bile, or its flow into the intestines; they also increase the effect of diaphoretics and diuretics. We give a list of the principal mercurial compounds, their uses, and doses:—

Hydrargyri Ammonio-Chloridum (White Precipitate), used externally as a powder to

destroy lice in the head, and as an ointment.

Hyd. Bichloridum (Corrosive Sublimite). One of the strongest poisons known; given in venereal complaints with the greatest advantage, when a quick and general action is required; but its effects are often not permanent; in lepra, combined with antimonials, and in chronic rheumatism. A solution of 3 grains in a pint of Water, makes a good gargle in venereal sore throats, or a little stronger for breaking the abscess in cynanche tonsillaris; this strength also may be used as a wash for scabies, for tetters, and for destroying fungi. Given internally, the dose is from 1-6th to $\frac{1}{2}$ grain, made into a pill with Extract of Poppies. When taken in poisonous doses, the best antidote is White of Egg.

Hyd. Bisulphuretum. Given as an anti-syphilitic in doses of from 10 to 3 grains in electuary, or bolus; and as a fumigation against venereal ulcers of the nose, mouth, and throat, $\frac{1}{2}$ drachm being thrown upon a red hot iron; also in the form of lotion for gouty complaints and cutaneous affections.

Hyd. Chloridum (Calomel). In venereal diseases and liver complaints, sometimes combined with Opium; in scrofula, with Cicuta; in convulsive affections with Opium, Camphor, and Assafoetida, &c.; in Dropsy, with Squills, Foxglove, and Elaterum; in rheumatism and lepra, with Antimonials, Guaiacum, and other sudorifics; as a purgative in any case not attended with intestinal inflammation; generally with some other purgative; combined with Lime Water makes *Black Wash* (which see).

Hyd. Iodidum, in strumous affections and lepra; dose 1 grain, gradually increased to 3 or 4 grains, used externally in ointment.

Hyd. Nitrico-Oxidum (Red Precipitate). Seldom or ever given internally; used in the preparation of ointments, and applied in this form, or in that of powder, to chancres and foul ulcers, to cleanse and stimulate them; sometimes blown into the eye, in the proportion of $\frac{1}{2}$ a grain to 4 grains of Sugar, to remove specks on the cornea.

Hyd. cum Cretæ (Quicksilver and Chalk, or Grey Powder). Chiefly given as an alterative in cutaneous and bilious affections; dose, 5 to 30 grains.

There is, likewise, a *Mereurial Liniment* which is stimulant and discutient: a good application for indolent swellings, or parts affected with chronic or venereal pains.

These are but a few of the principal forms in which Quicksilver is administered and

applied; there are many others, for there is, perhaps, no single agent in the *Materia Medica* whose uses are more numerous and various; it not only has a specific action, but it appears to quicken and intensify that of any other drug with which it is combined; thus it is that we find it so often in combination with diaphoretics, with diuretics, with purgatives, &c.; perhaps its most remarkable and valuable property is its power of controlling and subduing inflammations of whatsoever part, and its action in this respect is especially marked and rapid in those affecting the eye. But it is on the liver that its most decidedly specific action is exerted; in small doses it stimulates the flow and improves the character of the bile; in larger it causes the bile to flow yet more freely, and carries it through the bowels with a purgative action. Frequently, when the liver is in an overloaded condition, a very small dose of some *Mereurial* preparation, such as Calomel, will cause a very rapid descent of the fluid, often in an aerid condition, giving rise to diarrhoea, attended with severe griping. When it is intended that Mercury shall act upon the system generally, its tendency to purge must be checked by combination with Opium, or it will be likely to pass off too rapidly, without producing the desired effect. When intended to affect the liver, Abernethy recommends that it shall be given by itself at night, a 5 grain Blue Pill is best, or the same quantity of Grey Powder, and a Black Draught, Castor Oil, or some other liquid purgative, in the morning.

On certain constitutions Mercury exerts a peculiar influence; causing in some great irritation, in others deadly faintness and nausea. Children can bear larger doses than adults, indeed it is often difficult to salivate a child. The stools caused by Mercurials are generally of dark olive green colour, particularly is this the case with the young.

The best antidote for poisons by any of the forms of Mercury is White of Egg; that of one Egg should be given for about 3 grains of the metal taken, if it is possible to ascertain this. Where there is great constitutional susceptibility, such poisoning sometimes arises from the administration of very small doses; weakly persons and children are most likely to be so affected. The symptoms are swelling of the cheeks with those of salivation generally, and sometimes mortification of the gums, &c. The remedies, Muriatic Acid in two drop doses, every six hours, with a grain of Quinine, or in Decoction of Bark; wine and strong

animal broths are also required. Care must be taken to administer Mercurial Powders in some saccharine, or gummy fluid; for the Grey Powder, Milk will do, but Calomel requires something thicker to keep it suspended; either of these may be given dry, merely mixed with Sugar and placed on the tongue, the patient taking a little fluid directly after to cleanse the mouth.

The peculiar effects of Mercury may be produced on the system by rubbing it into the skin: the Mercurial or Blue Ointment is generally employed for this purpose. Those who work in Quicksilver mines, are employed in the manufacture of looking-glasses, or are in any other way connected with the use of the metal, often become affected with Mercurial Palsy, which is characterized by a shaking of the limbs, which renders them incapable of continual labour.

There is no doubt that Mercury is far too indiscriminately used, and often when it is necessary its employment has been carried too far. Persons who are taking Mercury should carefully guard themselves against exposure to wet or cold. See *Argentum*, *Hydrargyrum*, *Mercury*.

QUINCE. This plant, called by botanists *Cydonia Vulgaris*, and belonging to the na-



tural order *Rosaceæ*, yields a fruit often used for imparting a pleasant flavour to apple and other pies, before its introduction into which it should be stewed, to render it as digestible as possible. Quinces make a not unwholesome marmalade, and the syrup prepared from them is a grateful addition to drinks during sickness; the seeds, when boiled in warm water, make a good mucilaginous decoction, which is useful in thrush and other irritable conditions of the mucous membrane; the form of preparation is—Quince Seeds 2 drachms to 2 pints of water, boil ten minutes and strain.

QUININE. This is an alkaloid, first discovered in the *Cinchona Cordifolia*, or Yellow Bark, where it exists with Cinchona; these two bitter alkaloids, constituting the medicinal properties of all the barks in which they are found in combination with kinic acid. Quinine is extracted from the wood by a chemical process, and, being afterwards combined with Sulphuric Acid, forms the Crystallized Disulphate of Quina, or Quinine, as it is commonly called. For internal administration this has almost entirely superseded the more bulky and disagreeable preparations of the bark itself, than which it is more active and efficacious. Except, perhaps, Opium, there is no drug more valuable to the medical profession than this. As a tonic and anti-periodic, it stands unrivalled; in agues, and intermittent fevers of all kinds, it is now indispensable; in neuralgic affections, and those arising from debility, its good effect is generally marked and decided. It has lately been recommended in cases of typhoid fever, and in the sinking stage, combined with Port-wine, is certainly beneficial. The common dose of the Disulphate of Quina is one or two grains three times a day; it is best given in solution, combined with double the quantity of dilute Sulphuric Acid, without which, or some other acid, it is insoluble in water; it is often given in some bitter infusions, such as Gentian, or Calumba; sometimes in Infusion of Roses, the acid of which readily dissolves it.

Many elegant and useful combinations of this substance have recently been introduced, such as the Valerianate of Quinine, highly recommended as a nervine and antispasmodic; the Arsenite of Quinine, which combines the antispasmodic action of the arsenious acid with that of the Quina; and the Citrate of Iron and Quinine, most serviceable in debility and facial neuralgia.

Quinidina, or Quinidine, is an alkaloid found in some kind of barks; it much resembles the true Quinine, both in its appear-

ance and action, although it is, perhaps, somewhat weaker. There is also a brown kind, called *Amorphous Quinine*, which is the Quinidine in an impure state; it does not dissolve so readily as the white crystals, nor act so efficiently; the dark thick solution which it makes with acid, is apt to cause nausea, and other unpleasant symptoms.

QUINSY. This is a throat affection, called by old writers *Squincy*, or *Squinancy*; a term derived from the Greek root *Cynanche* (which see), through the intermediate corruption of the French word *esquinancie*. This kind of inflammatory sore throat generally commences with cold chills, and other febrile symptoms; there is fullness, heat, and dryness of the throat, with a hoarse voice, difficulty of swallowing, and shooting pains towards the ear. When examined, the throat is found of a florid red colour, deeper over the tonsils, which are swollen and covered with mucus. As the disease progresses, the tonsils become more and more swollen, the swallowing becomes more painful and difficult, until liquids return through the nose, and the viscid saliva is discharged from the mouth; very commonly the fever increases also, and there is acute pain of the back and limbs. Sometimes, when the inflammation has reached a certain height, it gradually subsides, and the tonsils diminish with it, although they commonly remain for a considerable time unnaturally large; at others, there is a formation of abscess in one or both tonsils, and the patient suffers the greatest agony and distress, appearing often upon the point of suffocation; and this continues to be the case until the abscess bursts, or is opened to allow the matter to escape.

Treatment. When the case is not severe it may be treated, in the early stages, like *Catarrh* (which see); but when it is, more active measures will be required. An emetic, followed by a strong purgative; a blister outside the throat, and warm bran or linseed poultices; a cooling regimen with acid water, or pieces of rough ice put into the mouth and allowed to dissolve; leeches at the side of the throat if it swells much; inhaling the steam of hot water through an inhaler, or an inverted funnel; and the continuation, every four hours or so, of a saline aperient; these will be the proper measures to adopt. When the abscess has burst, and the inflammatory symptoms have subsided, a generous diet will be necessary, with tonic medicines. If the tonsils continue swollen, they should be rubbed outside twice a day with stimulating lini-

ments: Turpentine and Opodeldoc, equal quantities, will be as good as any; and the throat gargled with salt and water, a teaspoonful of the former put into a tumbler full of the latter. When there is chronic soreness of the throat, with hoarseness and cough, there is commonly also a relaxed and elongated uvula, which closes the passage when the patient lies down, and causes a sensation of choking. In this case a gargle made with Salt and Cayenne Pepper (about a table-spoonful of the former, and a teaspoonful of the latter, in a pint of boiling water) should be tried; the throat should be kept uncovered, and sponged with Vinegar twice a day. If these means are unsuccessful, it may be necessary to have part of the uvula cut off: this must be done by a surgeon, as must also the application of caustic, sometimes to be made when the throat has a granulated appearance. See *Throat, Tonsils, Uvula*.

QUOTIDIAN AGUE. A species of intermittent fever in which the intermission is every twenty-four hours; the paroxysm commencing in the morning, and the usual duration being under eighteen hours. See *Ague, Fever, Intermittent*.

RABIES. A term applied to madness occurring after the bite of a rabid animal; there are two varieties, which are characterized by marked symptoms, viz., *R. canina* and *R. felina*—Canine and Feline Rabies, the one being caused by the bite of a dog, and the other by that of a cat; in the first the constriction extends to the muscles of deglutition, which are violently convulsed at the appearance, or idea, of liquids; in the last, the spasmodic symptoms are less acute, and frequently intermitting. See *Hydrophobia*.

RACHIS, OR RHACHIS (Greek for the *Spine*, which see). From this root come the terms *Rachialgia* (Greek *algos*, pain), literally, spine-ache, it is applied to *Painters' Cholic* (which see); and *Rachitis*, a disease which consists of want of due firmness in the bones, in consequence, no doubt, of the deficiency of phosphate of lime in their structure. This affection is so named from its having been supposed to depend on disease of the spinal marrow.

RADICAL VINEGAR (Latin *radix*, a root). Concentrated Acid, which is the active principle of all vinegar, has been sometimes so called.

RADISH. The root of the *Raphanus Sativus*, a common garden plant of the natural order *Cruciferae*, is, as our readers are aware, very commonly eaten in an uncooked state; persons with good digestive

powers may not experience any ill effects from it, but those who are weakly and dyspeptic will be sure to do so. Of the wild Radish, which grows plentifully in our corn fields, we have spoken under its scientific name *Raphanea*.

RADIUS (the spoke of a wheel) a term applied to the small bone of the fore-arm.

RAINBOW WORM. A species of tetter occurring in small circular patches, each of which is composed of concentric rings of different colours; it is the *Herpes Iris* of Bateman. See *Herpes*.

RAISINS. The dried fruit of the vine, of which we make our plum-cakes and puddings, are, as an article of diet, unwholesome only because the tough indigestible skins are eaten; in the case of children they frequently cause much irritation and troublesome diarrhœa by lodging in the sacculi, or little pouches of the large intestines, where they may remain for weeks undigested, unless dislodged by a dose of Castor Oil, or some other active aperient. In these dried grapes the mucilaginous and, perhaps, the acid constituents, have been converted into grape sugar; they possess, therefore, a certain amount of nutriment. Those which come from Spain are by far the best; they include the Malagas, Muscatels, and Valentias. Raisins are used in various medicinal preparations, but more perhaps for the pleasant sweetness which they impart, than for their slight laxative properties.

RAMENTA (Latin *rado*, to scrape off). Filings, as of Iron. See *Ferrum*.

RAMOLLISSEMENT DE CERVEAU (French for softening of the brain) in Latin *Mollities cerebri*. This is the result of disease which sometimes reduces the organ to a pasty or pulpy condition, in which case there is a defect of nervous power, shown in *Paralysis* (which see).

RAMUS (Latin for a branch) as that of a bone, or an artery. *Ramification* is, in surgery, applied to the issuing of a small branch from a larger one, as of the minute branches from the larger arteries.

RANCEDO (Latin *rancus*, hoarse). Hoarseness, generally a symptom of some affection of the bronchial passages, and caused by a thickening of the membrane: if of long standing, or, as we say, chronic, but little can be done to relieve it; if the result of active inflammation, the general treatment must be as recommended under this head, and, for local treatment, Stimulating Liniments rubbed into the throat, and Warm Bran Poultices; if these are not successful, try Blisters, or paint the throat with strong

Tincture of Iodine until it becomes sore: Demulcent Drinks will sometimes be of service, and Acid Gargles. See *Cough*, *Croup*, &c.

RANINE (Latin *rana*, a frog). The name of an artery, and also of the vein of the tongue. *Ranula*, which is the diminutive of *rana*, signifies Frog-tongue, a tumour under the tongue, arising from an accumulation of saliva and mucus in the ducts of the sublingual glands. The term is derived either from an imaginary resemblance of the swelling to a frog, or from the peculiar croaking noise which the patient makes with it.

RANUNCULUS. The name of a genus of plants, all of which are more or less acrid or poisonous; their acridity depending on a



volatile principle which is destroyed by boiling, or even simply by drying; hence the buttercups of our fields, which belong to this genus, when cut with the grass and made into hay, lose their noxious properties. Taken internally, the fresh juice, or extract, of the *Ranunculus Acris* causes an intense inflammation of the digestive organs, and, if the dose has been considerable, it is a true acrid poison, and has been known to cause death; the juice of another common species, *R. Bulbosus*, applied to the nostrils, causes sneezing; a portion of the root has been found to act beneficially in cases of toothache; with the juice of *R. Thora*, an Alpine species, the Swiss hunters, it is said, were wont to poison their darts; and even the golden buttercup—that darling of our childhood—which botanists term *R. Repens* although less acrid than most, is so much so that cattle do not feed on it willingly; this, however, they do on the water-crowfoot, *R. Aquatilis* probably because the acrid

principle of the plant is destroyed by its immersion in water. The juice of most members of this genus of plants when applied to the skin acts as a rubefacient, and in some cases as a vesicatory, causing an actual blister.

RAPE OIL. An oil expressed from the seeds of the cultivated Rape or Coleseed



(*Brassica Napus*), of the natural order *Cruciferae*; it was sometimes used in making ointments, &c., but is not commonly now.

RAPHANIA. An affection attended with spasms of the joints, trembling, &c. First noticed in Sweden, and so called because it was supposed to be produced by eating the seeds of the wild radish, which in that country, as in this, often grows among the corn; the plant (*Raphanus Raphanistrum*), is much like Charlock, for which it is often mistaken. To the tribe *Raphaneæ*, belong two well-known garden plants—the *Radish* and the *Sea-kale* (which see); and also the *Sea-radish* (*R. Maritimus*), the roots of which, for culinary purposes, are said to be superior to Horse-radish.

RAPHE (Greek *raphto*, to sew). A line having the appearance of a seam, as that of the corpus callosum, the scrotum, &c. From the same root comes the botanical term, *Raphides*, small spiculæ, obtained from plants, and supposed by some to be hairs, but described by Raspail as acicular crystals of phosphate of lime, which is known to abound in the textures of vegetation.

RAPTUS (Latin *raphio*, to seize hastily). Literally a sudden surprise of any kind; thus cramp is called *Raptus nervosum*.

RAREFICATION (Latin *rarus*, thin, and

facto, to make). The act of making a substance less dense; this is generally effected by the increase of temperature; the term being mostly applied to elastic fluids, which expand by heat, and so become *rarefied*. To solids and liquids we apply the terms dilation and expansion; to aeriform fluids Rarefaction, which it has been found by experiments with the air-pump can be carried to so great an extent as to cause air to occupy a volume 13,000 times greater than it does ordinarily. Air in a highly rarefied state, as it is at great elevations, which will cause the same effect as heat does below, is unfit for breathing; thus travellers ascend high mountains and go up in balloons find, frequently experience the most acute pains at every breath they draw.

RASARA (Latin *rado*, to scrape off). A rasure or scratch; the term is sometimes applied to the raspings or shavings of any substance, as Guaiacum or Quassia wood.

RASHES. Patches of superficial redness of the skin; they may occur on any part of the body, and are generally accompanied by increased heat and irritation, sometimes by swelling, inflammation, and considerable pain; they are not contagious.

Under the head of *Red Rashes*, or *Blotches*, are generally comprehended *Abrasions*, *Erythema*, and *Excoriations* (which see). When Red Blotches occur in the face they are generally connected with some constitutional derangement, often with dyspepsia, to the cure of which the general treatment must be directed; the face should be washed in warm water, and the Blotches dapped with Camphorated Spirit.

Rose Rash is common with children during dentition, and is, therefore, called *Tooth Rash*; it arises from intestinal irritation, and most usually shows itself about the face, although it may appear on any part of the body. With adults it usually occurs in hot weather; fatigue, drinking largely of cold water, or eating indigestible food, will bring it forth. It sometimes occurs during the eruptive form of small pox, and sometimes after vaccination, in a congeries of small dots or patches. Mild aperients, such as Rhubarb and Magnesia, cooling drinks, tepid baths, with frugal diet and rest, are the best remedies. There is usually considerable itching with these Rashes, which may be allayed by the application of Goulard Water, or some other cooling lotion.

RASPBERRY. This well known plant is the *Rubus Idæus* of botanists, belonging to the extensive natural order *Rosaceæ*. We need scarcely enumerate the various uses to

which its fragrant, sub-acid, and cooling fruit is applied; it is extremely wholesome, and allays heat and thirst perhaps better than any other kind of fruit excepting its near relative the *Strawberry* (which see), and, like that, it is not liable to acetous fermentation in the stomach. *Raspberry Jam* is one of the most pleasant and whole-



some of confections, and *Raspberry Vinegar* is very useful in times of sickness, to make acidulous drinks or gargles for sore throats; for the former purpose about a dessert spoonful should be mixed in a tumbler of cold Water; for the latter, the Vinegar should be used with half Water.

RATANY or **RHATANY ROOT.** The drug so called is the root of the *Krameria Triandria*, of the natural order *Polygalaceæ*, a native of Peru, where it is called *Ratanhia*. It is tonic and powerfully astringent, and is efficacious in chronic diarrhoea and passive hæmorrhages. It is much used in the manufacture of Port Wine, to which it imparts its characteristic rich red colour. Chemical analysis shows the root to contain tannin, lignin, and minute quantities of gum, starch, saccharine matter, and krameric acid, to which its peculiar properties are supposed to be owing.

RATSBANE. A name sometimes applied to White Arsenic, and also to Nux Vomica, for obvious reasons.

REACTION. In physics means counteraction, or the resistance offered by one body to the opposing force of another: in medicine, it is the resistance of the animal system to depressing causes and influences, the tendency of which is, not merely, to restore the ordinary level, so to speak, but to go above

and beyond it, to an extent proportionate to the force exercised in an opposite direction: thus, after the shivering, pallor, sad expression of countenance, slow and weak pulse, of the cold stages of fever, we have the flushed cheek, bright eye, full bounding pulse, and hot skin of the reactionary stage, when all the physical powers seem stimulated to increased activity. This tendency of nature to rise superior to the depressing influences, to which she has been obliged for a while to succumb, must be borne in mind in any efforts which may be made for restoration from a state of depression, especially in cases where fever is present or imminent. Stimulants should, in all such cases, be very carefully administered; or, if absolutely necessary for the preservation of life, they should be such as are not likely to act as very powerful excitants of the brain; external warmth, or sinapisms; or emetics of mustard; Tea, Coffee, the preparations of Ammonia, especially Sal Volatile, may all be employed in preference to alcoholic fluids, as means of rousing the system to the necessary reaction.

READING, OR SPEAKING ALOUD, is a good exercise for those who have sound healthy lungs, and are free from affections of the throat and bronchial passages; but, by those who are predisposed to consumption such exercise should be avoided as much as possible; as, if persisted in, there will, probably, ere long be spitting of blood, huskiness, dry cough, and other bad symptoms. Where there is a predisposition to head affections, also, loud and continuous Reading or speaking, should be avoided, as the quickened respiration and circulation, which are caused by this practice, will be likely to bring on an attack of apoplexy. In cases of hysteria and nervous disorders, however, this exercise may be recommended as remedial, provided it be not carried beyond the strength of the patient. Those who are obliged to read or speak much, as ministers, lecturers, &c., should be careful not to expose themselves to fogs or cold air, and to moisten the throat occasionally with a little water, or some demulcent, or acidulous drink.

REAGENT (Latin *re*, again, and *ago*, to act). Any substance employed in chemical analysis for ascertaining the quantity of quality of the component parts of bodies by reacting upon their elements. See *Test*.

REALGAR. The Protosulphuret of Arsenic. It is either *native*, and dug out of the earth, as in China; or *factitious*, procured by boiling orpiment or the sesqui-sulphuret in subliming vessels. See *Arsenic*.

RECEIVER. A vessel fitted to the neck of

a retort, alembic, &c., for the purpose of receiving the products of distillation; it is sometimes called the *refrigerator*, because in it the fluid, which rises as vapour, becomes cooled and condensed. See *Distillation*, *Retort*.

RECEPTACULUM CHYLI. The Receptacle of the *Chyle* (which see). This is an enlargement of the thoracic duct near the aortic aperture of the diaphragm.

RECLINATION. A term employed in Germany to denote the operation of turning a cataract, so as to change the position of its anterior and posterior surfaces. See *Cataract*, *Eye*.

RECREATION. Only those who have had a busy life, and are accustomed to great bodily and mental fatigue, can thoroughly enjoy Recreation; the idle and listless, who have little or nothing to do but saunter about the world with their hands in their pockets, cannot understand the meaning of the term; it is for the toilers and moilers to do this, and for such Recreation is a good and necessary thing; pity it is that so many of them get far too little of it. Let us not confound Rest with Recreation: the former is the mere passive enjoyment of repose after labour, and involves no exercise of the higher faculties; the animal may rest; the man must recreate himself, or he, ere long, sinks to the level of the brute; he must have pleasurable excitement for the mental and physical powers, whose action and reaction on each other is highly conducive to health both of mind and body. Many there are, it is true, who seek and find their Recreation in scenes of vice and debauchery, or, at best, in those pleasures which are merely sensuous, and this will naturally be the case with those who are overworked, especially if their minds are uncultivated. Many there are who are the willing slaves of sordid cares; absorbed in one engrossing pursuit, that of money getting. They cannot Recreate themselves, and are equally to be pitied with those who have no relish for true intellectual Recreation, and those who have no time or means to obtain it. The wise man, who desires a long life, will not scruple to make some sacrifices, for the sake of healthful Recreation; it is just so much better than medicine, as prevention is better than cure; but, if too much of it is taken, it ceases, like many good things, to be salutary, nay, not only so, but is actually destructive of health.

RECTIFICATION. The repeating a distillation, or sublimation, several times, in order to ensure greater strength and purity in the substance: thus, when we speak of Rectified

Spirit, we mean Spirit which is over proof, or extra strong.

RECTOR SPIRITUS. An old name for the aromatic principle of plants. See *Essential Oil*.

RECTUM (Latin, *rectus* straight). This is the gut which opens into the anus; it is the last of the *Intestines* (which see). From the same root come the names of several muscles, such as the *Rectus superior*, *inferior*, *internus*, *externus*, *capitus*, &c.

RECURRENT (Latin *recurro*, to run back). The designation of a branch of the posterior tibial artery, and of the inferior laryngeal nerves.

RED GUM. According to Dr. Willan, this is a corruption of the term *Red-gown*; the variegated spots of red upon a pale ground, being supposed to resemble the printed pattern of a piece of linen. This generally attacks infants at the breast, and is characterised by an eruption of minute hard pimples, sometimes of a pale colour, but more commonly red; except that their itching causes the child considerable annoyance at times, they are by no means very troublesome or dangerous; of themselves, they are of little consequence, but as symptomatic of some internal disturbance, they demand attention. When they appear, the action of the bowels should be carefully watched, and aperients administered if necessary. For the eruption, tepid baths about twice a week, should be resorted to.

REDUCTION (Latin *reduco*, to bring back). In chemistry this signifies the process by which a substance is restored to its original or natural state; it is generally applied to the operation of restoring metallic oxides to the metallic state. In surgery it is the operation by which a dislocated bone is restored to its proper situation. See *Dislocation*.

REFRIGERANTS. Medicines which diminish the morbid heat of the body; they may be external and local, or, internal and general. The chief of those in use are Acids, Cream of Tartar, Ice, Mindererus Spirit, Nitre, Sorrel, Summer Fruits, Tamarinds, Vinegar and Water. A *Refrigeratory* is a chemical vessel filled with water for condensing vapours, or for cooling any substance that passes through it.

REGIMEN (Latin *rego*, to rule). A rule of diet, &c. prescribed for a patient; it includes not only the kind of food, drink, &c., and times at which it is to be taken, but also recreation, exercise, employment, dress, &c. It is manifestly of great importance to the success of medical treatment that there should be strict attention paid to all these

matters; knowing the influence they have upon the health of an individual, we should be especially careful to observe the rules as to Regimen laid down by the wise physician. Under the various heads of *Clothing, Diet, Exercise, Food*, will be found so much upon this head, that we need not dilate on it here.

REGION. A term applied to the artificial divisions of the body, being those of the *Chest* and of the *Abdomen* (which see).

REGULUS (Latin *rex, regis*, a king). This name was originally given to metallic matters, when separated from other substances by fusion; it had its origin in the expectation of the alchemists of finding gold, the king of metals, at the bottom of their crucibles. The term was afterwards applied to any metal extracted from the ores of the same metals; thus we read in old works, of *Regulus of Antimony*, of *Arsenic*, &c. From the same root comes the term *Regius*, royal, applied by way of distinction, as *R. morbus*, Royal Disease, or Jaundice, so-called from its golden colour; and *R. aqua*, Royal Water, a mixture of Nitric and Muriatic Acid, so named from its power of dissolving gold.

RELAXATIO UTERI. Relaxation of the Uterus; a term denoting that partial descent of the womb, when it sinks down to the middle of the vagina; if the descent be lower than this (to the labia) it is termed *Procidencia*, and, if lower still, it is *Prolapsus* (which see).

REMEDIIUM (Latin for a Remedy, which term comes from *medior*, to cure); thus all drugs which contribute to the alleviation of pain, or have a curative effect on disease, are Remedies.

REMITTENT. The name of a class of fevers characterized by remissions and exacerbations, but without clear intermissions, the paroxysms occurring every twenty-four hours. Remittents are commonly divided into three classes, viz., the mild, the malignant remittents, and *Hectic Fever* (which see).

RENES (Latin for the kidneys), hence anything belonging to or affecting the kidneys, is termed *renal*; hence, too, the term *reins*, applied to the part of the back where these organs are situated.

RENNET, or **RUNNET** (German *runnen*, to run or curdle). The inner membrane of the calf's stomach, which, when infused in hot water, yields a fluid which has the property of coagulating milk, and converting it into curds and whey. A popular and not unwholesome article of diet called Fresh Cheese, is made of Milk and Rennet, with Sugar and Nutmeg. Gray gives the following recipe for *Rennet Whey*:—Milk 2 pints,

Rennet $\frac{1}{2}$ an ounce, infused in a little hot water; mix, and keep in a gentle heat for some time, then strain. See *Whey*.

REPELLANT (Latin *repello*, to draw back). An application which causes a disease to retire from the surface of the body.

REPULSION (Latin *repello*). That effect of caloric, by which the particles of a body, into which it enters, are removed from each other; this is similar to rarefaction, and is the opposite of cohesion.

RESIN. This is a solid inflammable substance of vegetable origin, soluble in alcohol, and in oils, but not in water.

Resins, properly so called, differ from balsams, although the latter are resinous bodies, and may be either solid or liquid; they have all of them more or less traces of the presence of benzoic acid: the Germans distinguish these as *Natural Balsams*, and call the others *Hard Resins*; the first are usually of a soft consistence, and contain a certain proportion of volatile oil.

The common Resin of commerce is the hard, yellow, semi-transparent residuum, left after the distillation of the volatile oil of *Turpentine* (which see); united with alkalies it forms a soluble soap: it has diuretic properties, but is not given internally; as an external application in plasters, cerates, and ointments, it is stimulant and also protective; the Resin Ointment of the Pharmacopœia known as *Yellow Basilicon* has long been in high repute as a drawing application, and the common *White Sticking Plaister* has in it a large proportion of Resin. The resins are capable of uniting with the bases, and these combinations are called *Resinates*.

RESOLUTION (Latin *resolvo*, to relax). The subsidence of inflammation without abscess, ulceration, mortification, &c.; or the dispersion of swellings and tumours. From the same root we have *Resolvent*, any substance employed to reduce or subdue inflammatory tumours, &c.

RESPIRATION (Latin *respiro*, to breathe again). The function of breathing, which consists of two acts, viz. *inspiration* and *expiration*; the first, according to Sir H. Davy, generally takes place about 26 times in a minute, the quantity of air usually inspired, or drawn in, being about 13 cubic inches; the last act alternates with the first, and of course about the same volume of air must be driven out. We sometimes speak of these two acts as *inhalation* and *exhalation*; united they constitute the function by which the nutrient circulating fluid of an organized body is submitted to the influence of air, for the purpose of changing

its properties: by this duplex operation the vital fluid is oxygenized and decarbonized as we have endeavoured to explain under the heads *Blood, Breath, &c.* We may here observe that Respiration goes on in plants as well as animals, but with the latter it is the carbon which is extracted from the atmosphere, and the oxygen which is returned: a wise and beneficent provision which maintains the balance necessary for both animal and vegetable life. In fishes, respiration is performed by means of the gills, which answer the purpose of our lungs, being acted on by the air contained in the water.

RESPIRATOR. An instrument intended to modify the temperature of the air inhaled, and thus lessen its noxious influence on the lungs; it is made so as to cover the mouth, over which it is secured by means of proper bandages; it is composed of several folds of silk or other material through which the air is, so to speak, filtered and rendered less keen, a manifest advantage to consumptive persons or any who have delicate and susceptible lungs, which we speak of as *Respiratory organs*.

REST HARROW. The *Ononis Arvensis* of botanists; a common wayside plant of this country belonging to the natural order *Leguminiferae*; it is sometimes called Cam-



mock, and has long been given to horses as a diuretic; it has also had some repute as a remedy in chronic rheumatism; the form of administration being that of a decoction of the fresh bark and roots, of which, it is said, a quart must be taken daily.

REST. That a certain amount of Rest is necessary to man's physical well-being it

scarcely needs an argument to prove. Not only the voluntary muscles, but also the thinking powers—the will and attention, require this. God has so ordered that the action of the involuntary muscles, those by which breathing, &c., is performed, shall go on unceasingly, without wear or fatigue; but with those of nervous sensation and others, which receive their directing power from the brain, it is different; these must have their seasons of Rest, or they will soon fail to perform their functions. With regard to the amount required, this varies with age, state of health, constitution, &c., but as a general rule from 6 to 8 hours appears to be about the proper range, and this should be taken in a pure atmosphere, and in a horizontal position. See *Sleep*.

RESUSCITATION (Latin *resuscito*, to rouse again). The act of reviving or restoring to life, as exhibited in persons apparently drowned, or rendered unconscious by inhaling noxious gases, &c. See *Asphyxia, Carbonic Acid Gas, Drowning, Suffocation, &c.*

RETCHING (Saxon *hræcan*, to stretch, to vomit; properly, to reach). This term is applied to an ineffectual effort to vomit. Violent Retching is one of the most distressing symptoms of biliary and other derangements of the stomach; it is sometimes very obstinate and long-continued, so as completely to exhaust the patient, especially if in a weakly state, and cause a rupture of a blood-vessel, or other alarming consequences; if it proceeds from an overloaded stomach, or the presence of any poisonous substance, it is best to produce vomiting by an emetic; otherwise effervescing draughts should be tried, with 5 drops of Laudanum in each, and the other remedies recommended under the heads *Nausea, Sickness*.

RETE MUCOSUM (Latin for mucus net). The name of the tissue lying directly under the dermis. See *Skin*.

RETIFORMIS (Latin *rete*, a net, and *formus*, a likeness, netlike). A name given to the erectile spongy tissue of the vagina (which see).

RETINA. The netlike expansion of the optic nerve on the inner surface of the eye (which see).

RETORT. A globular vessel of glass with a long neck bent downward like the bill



of a bird. In distillation it is generally made of glass or earthenware, and when furnished with an opening in the top, through which it may be charged, it is called a tubulated Retort. The end of the tube is made to fit into the short neck of a receiver, in which the products of distillation are collected.

RETROVERSIO UTERI (Latin *retro*, backwards, and *verto*, to turn). A morbid inclination of the uterus to turn backwards.

REVERIE (French *révêr*, to dream, or be light headed). Properly raving or delirium, but as generally understood, a voluntary abstraction, an inactivity of the whole or greater part of the external senses to the impressions of surrounding objects during wakefulness. Dr. Good describes three species of this mental aberration, which he calls: 1. *Absence of Mind*, in which the attention is truant, and does not yield readily to the dictates of the will. 2. *Abstraction of Mind*, in which the attention is riveted, at the instigation of the will itself, to some particular theme unconnected with surrounding objects. 3. *Brown Study*, in which the attention has the control of the will to relax itself, and give play to whatever trains of thought are uppermost.

REVULSION (Latin *revello*, to pull away.) The occurrence of a secondary disease in a part remote from the seat of the primary affection (see *Derivation*).

REYNOLD'S SPECIFIC. A nostrum for gout and rheumatism once in high repute; it was made thus:—Fresh bulb of Colchicum, 3 ounces; Sherry Wine, 16 ounces; macerate for 8 or 10 days in a gentle heat; colour with Syrup of Poppies, and flavour with Rum. A dangerous medicine in unskilful hands; the inventor is said to have killed himself by taking an overdose of it.

RHEUM (Greek *reo*, to flow). A thin serous fluid, secreted by the mucous glands, &c., the result of an increased action of the vessels of any organ. The term *Rheuma* signifies a cold, or febrile defluxion of the chest, of the fauces, or of the nostrils: the old pathologists distinguished three several affections as *Catarrhus*, *Bronchus* and *Coryza*. Formerly the term was synonymous with *gutta*; thus cataract was called obscure Rheum, or gutta; and Amaurosis, the transparent, or serene Rheum, or gutta.

RHEUMATISM (Greek *reuma*, a watery humour, and *reo*, to flow). This painful disease, which affects the muscles and joints of the human body, was so named by the ancients, under an impression that it proceeded from a defluxion of humours; it chiefly affects the larger joints, as the

hips, knees, and shoulders, and is generally attended with swelling and stiffness; when accompanied by fever it constitutes *Acute Rheumatism*, or *Rheumatic Fever*. Some pathologists make the following distinct varieties of the disease:—1st, *Articular Rheumatism*, occurring in the joints and muscles of the extremities; 2, *Lumbago*, occurring in the loins, and mostly shooting upwards; 3, *Sciatica*, occurring in the hip joint, with emaciation of the nates; 4, *Spurious Pleurisy*, occurring in the muscles of the diaphragm, often producing inflammation of that organ.

Acute Rheumatism generally commences with a feeling of weariness, shivering, and a quickened pulse, accompanied by redness, heat and pain, in or around one or more of the larger joints; sometimes several are affected at once, but usually they are attacked in succession; this method of going from one joint to another being a marked characteristic of the disease; sometimes the first joint is relieved, when the attack is felt in another, but not always: sometimes the whole of the larger joints become implicated, and then the smaller ones, and finally the heart, in which case there is generally a fatal termination to the patient's sufferings. The fibrous tissues of the body appear to be the media by which the Rheumatic affection is communicated from one part to another; the disease, it is likely, is constitutional, depending on a morbid condition of the blood; one of its symptoms is considerable heat of the skin, and a profuse sour-smelling perspiration; generally the urine is high-coloured, and deposits a sediment like brick-dust. In one of the acute forms of the disease there is puffiness around the part attacked, with distinct red lines running from it, and, subsequently, œdema; with this we have, generally, a high degree of inflammatory fever, with a furred tongue, and very copious acid perspirations; this is the form in which the heart is most likely to be affected. In the other and more common form, the fever is not so violent, and moderates as soon as the joints begin to swell; this form is generally called Rheumatic Gout.

The similarity between Gout and Rheumatism renders it probable that the same cause may originate both; there is, however, a marked distinction in the circumstance, that in Gout the poison which is in the system, separates itself from the blood, and is deposited in the form of chalk-stones; in the latter it appears to be thrown out in that peculiar acid so remarkable in the perspiration.

Cold and moisture would seem to be the principal exciting causes of acute Rheumatism, probably by checking perspiration, and so preventing the poisonous principle from passing off by the skin, so that it is retained, and circulates in the blood. Violent exercise and over exertion will sometimes bring on an attack of this disease, which, like Gout, is hereditary in some families. Persons between the ages of 15 and 40 are most subject to it, but where there is the above-mentioned predisposition it often shows itself in the young.

The *Treatment* of the acute form should be prompt and active, the inflammatory fever having first to be subdued: purgatives and general bleeding, if the patient is of full habit, but not the latter otherwise. Dr. Graves says that in this disease, "Blood-letting should be practised with great caution, and its effects carefully observed: take away five or six ounces of blood, and if the pain be lessened and the sweats diminished, you are encouraged to bleed more boldly."

About 3 grains of Calomel at night and a Black Draught in the morning, to be repeated every four hours until the bowels are freely opened; plenty of warm diluent drinks, and confinement to bed with warmth to promote perspiration. Apply to the inflamed parts a lotion composed of Spirit, Vinegar, and Water, one part of each of the former to two of the latter, with the chill taken off; if the pain is very great at the joints, Leeches may be applied. When the inflammation is in some measure subdued, recourse may be had to the grand specific in diseases of this class, viz., Colchicum, 15 drops of the Wine of which may be taken every four hours, with $\frac{1}{2}$ a drachm of Sweet Spirits of Nitre, $\frac{1}{2}$ an ounce of the Liquor of Acetate of Ammonia, and 1 ounce of Camphor Mixture; at bed time a scruple of Dover's Powder, with two grains of Calomel, until the mouth becomes slightly affected, when the latter must be omitted; should the action of the Colchicum on the bowels be too strong, reduce the dose by one-half, or omit it altogether, and give $\frac{1}{8}$ grain of Tartrate of Potash, with 5 grains of Nitrate of Potash, in Camphor Mixture, every four hours. Should the joints continue swollen and purple, blisters may be applied after the Leeches, and when the bites are healed, friction with Mercurial Liniment, and an air-tight covering over cotton carded wool, should be applied.

In less acute cases, where the urine is acid, and deposits the before-mentioned

sediment, a mixture like this may be taken in conjunction with saline aperients: Bicarbonate of Potash 2 drachms, Infusion of Gentian, or Calumba, 6 ounces; take 1 ounce three times a day until the deposit ceases; or substitute for the Bicarbonate, the Liquor of Potash, 1 drachm. Also dissolve a little Nitrate of Potash in Barley Water, and take a wineglassful now and then as a restorative to health. When the disease appears to be nearly subdued, take Hydriodate of Potash 1 drachm, in Decoction of Sarsaparilla 8 ounces, a wineglassful twice a day.

When Rheumatism has become chronic it is generally very intractable; it is most capricious in its visitations, sometimes affecting one joint, sometimes another, and generally leaving the part attacked swollen and tender; to this it will frequently return, sometimes causing thickening of the joint and permanent lameness; sometimes the symptoms resemble those of acute Rheumatism and require leeching, spare diet, and a similar line of treatment; but this is not generally the case: a tolerably generous diet, with nervous stimulants and stimulating applications being mostly necessary for the chronic forms of this troublesome and painful disease, in which, excepting Colchicum, nothing appears to exercise such a specific action as Guaiacum, which may be taken in the form of powder, or tincture. Besides these two remedies, Ginger, Mustard, Sulphur, Turpentine, Compound Powder of Ipecacuanha, and Cod Liver Oil, have all been found beneficial. Indeed, there is perhaps no disease for which so many different "cures" are recommended; nor is there one which more obstinately retains its hold on the system, and defies all attempts to dislodge it. Anything which promotes free perspiration is likely to be beneficial; warm bathing and friction; sulphureous, hot air, and vapour baths, have been found of great service, and the patient must not be disheartened if they do not succeed at once, or if the disease returns after they have, as it appeared, subdued it; he must continue the remedies for a long time, and return to them again and again if necessary. Seldom or ever is Rheumatism quite got rid of, when once it has taken a hold of the system. For a description of other of its forms, with modes of treatment, see *Lumbago* and *Sciatica*.

RHODIUM (Greek *rodon*, a rose). A metal discovered by Dr. Wollaston, among the grains of crude platinum, and so named from the rose colour of some of its compounds.

RHODODENDRON. The name of a genus

of plants of the natural order *Ericaceæ*, some of which are reputed to possess medicinal properties; the juices of the whole of them are acrid, and to some extent, narcotic, giving a slight foundation for the idea entertained by the ancients, that the honey collected by bees from the species *Azalea Pontica*, drove those mad who partook of it.



The *R. Crysanthemum*, a small shrub, about a foot high, a native of Siberia, has stimulant, narcotic, and diaphoretic properties, causing, when taken in large doses, vomiting, purging, and delirium. It enjoys in Siberia a great reputation for efficacy in a variety of diseases, but is chiefly used as a remedy in rheumatism; an infusion of the leaves is taken, which causes a creeping or pricking sensation, which gradually subsides, and with it the rheumatic pains; it is also said to be good in palsy and syphilis. *R. Ferrugineum* is employed by the inhabitants of the Alpine districts, where it grows, to produce perspiration. A thick oil made by infusing the buds, and called by the Piedmontese *Olio di Marmotia*, is used by them as a healing application for wounds, and as a liniment in diseases of the joints. *Ledum Palustre* grows in the north of Europe and North America, where it is called Wild Rosemary; its leaves, which have a balsamic odour and aromatic bitter taste, are used to allay irritation in whooping-cough, dysentery, and various cutaneous diseases, especially leprosy and scabies: the Decoction is employed both externally and internally; an oil is obtained from the leaves by distillation, whose odour is intoxicating, and taste aromatic and bitter. The leaves of *L. Latifolium*, plentiful in North America, sometimes called Labrador Tea, have an agreeable taste and odour; they are

esteemed pectoral and tonic, and are often used as a substitute for Tea. The *Kalmia Latifolia*, a very beautiful shrub, found all over the United States, and called Mountain Laurel, and Calico Bush, is narcotic and very poisonous, so much so, that the Indians use the juice to poison their arrows with, and, when tired of life, destroy themselves with a decoction of the leaves. A wash or ointment prepared from these leaves, is found useful in scald-head, itch, and other cutaneous affections, and also in syphilitic eruptions. The infused leaves of *K. Augustifolia*, are used by the negroes of North Carolina, as an application to ulcerations between the toes.

These are some of the uses to which the members of the sub-class from which we derive some of the greatest ornaments of our greenhouses and conservatories, are put. Azaleas, Kalmias, Rhododendrons, how beautiful are they all! and yet imbued with what dangerous properties. Verily, looking upon them, we may indeed say, their beauty is a snare!

RHÆUS. The scientific name of the Red Poppy (*Papaver Rhæus*) which is one of our commonest wild plants; its petals are mucilaginous, bitter, and slightly narcotic, and are sometimes given in the forms of Infusion or Syrup, as an anodyne in the catarrhal affections of children; they are chiefly valued, however, for the colouring matter which they contain. See *Poppy*.

RHOMBOIDEUS. A muscle of a rhomboidal shape, which, arising from the spinous process of the 7th vertebra, and the 4 or 5 last dorsal vertebræ, and being inserted into the base of the scapular, brings the latter upwards and backwards; it is commonly divided into the upper and lower portions, called *minor* and *major*.

RHONCUS (Greek *ronkos*, snoring). Morbid sounds emitted in respiration, and occasioned by the passage of the air through fluids in the bronchi, or partially contracted passages. It is sometimes called rattling in the throat. Laennec termed it *Râle*.

RHUBARB. This is one of our most useful and commonly used drugs, the chief supply of which is obtained from Turkey and Russia; it is produced abundantly on the elevated lands of Tartary, Thibet, and Bhotan, growing spontaneously wherever the seed is distributed in places favourable to its growth. The species of *Rheum* which produce the Rhubarb of commerce are believed to be *R. Palmatum*, *Undulatum*, *Raponticum*, and *Australe*. The root is not considered fit for use until it is six years old. Some Chinese Rhubarb is imported

into Europe, but this is of an inferior quality. Attempts have been made to cultivate the plant for medicinal purposes in this country, but with very little success. Indian Rhubarb, which is a native of the Himalayas, has been most successfully cultivated for culinary purposes, and its varieties now furnish an abundant supply of fruit for pies, puddings, and preserves.



The Rhubarb belongs to the natural order *Polygonaceæ*. Its primary action is that of a mild purgative, but it has also tonic and astringent properties, so that its secondary effect is to confine the bowels; hence it is well fitted for use in diarrhoea, but not in constipation, or any affection in which a continuous aperient action is necessary; it is not fitted for inflammatory or febrile cases, although it seldom acts as an irritant; its stimulating, combined with its aperient properties, render it valuable in atonic dyspepsia. Generally speaking it suits children and aged persons best. Where the bowels are sluggish, combined with ginger and a little soap, it makes an excellent dinner pill. The ordinary dose of the Powder is from 20 to 30 grains. Some persons have no objection to chew the root, and to such as have not, this is a very good way of taking it. The following are the principal official preparations into which Rhubarb enters:—

Compound Rhubarb Powder, sometimes called *Gregory's Powder*, (which see).

Compound Rhubarb Pill. Dose, 10 to 20 grains.

Extract of Rhubarb. Dose, 10 to 30 grains.

Infusion of Rhubarb. Made by macerating 3 drachms of the sliced root in a pint of boiling water for 2 hours. Will not keep. Dose, a wineglassful.

Tincture of Rhubarb. One of the best cordial stomachics known. Dose, 1 drachm to 1 ounce.

Syrup of Rhubarb. Excellent for young children. Dose, 1 to 2 drachms.

There are also an immense variety of medical compounds, of which Rhubarb forms an important ingredient. Mixed with Grey Powder, it is an excellent remedy for the irritation of the bowels, common with children when teething. As a common aperient for the young, it is best given combined with Magnesia. With both children and adults it has the property of communicating a deep tinge to the urine; this should be known, as the change of colour in the secretion of the kidney may occasion alarm and misconception.

Garden Rhubarb, when used as food, has a slight aperient action upon the bowels. In some cases this may be beneficial, but not in all; those who have a tendency to relaxed bowels should not take it. Generally speaking, it is a wholesome and cooling article of diet; but, if too freely taken, will be likely to cause urinary irritation; it contains oxalic and mallic acid abundantly; hence its pleasant acidulous flavour.

Rhein was the name given by M. Vaudin to a substance procured by heating powdered Rhubarb with nitric acid, evaporating to the consistency of syrup, and diluting with water; it has been employed in continental practice, but never much in this country. *Rheinic Acid* is the acid contained in the stem of the garden Rhubarb; it appears to be identical with Oxalic Acid. The purgative principle of the medicinal Rhubarb has been called *Rhubarbarin*.

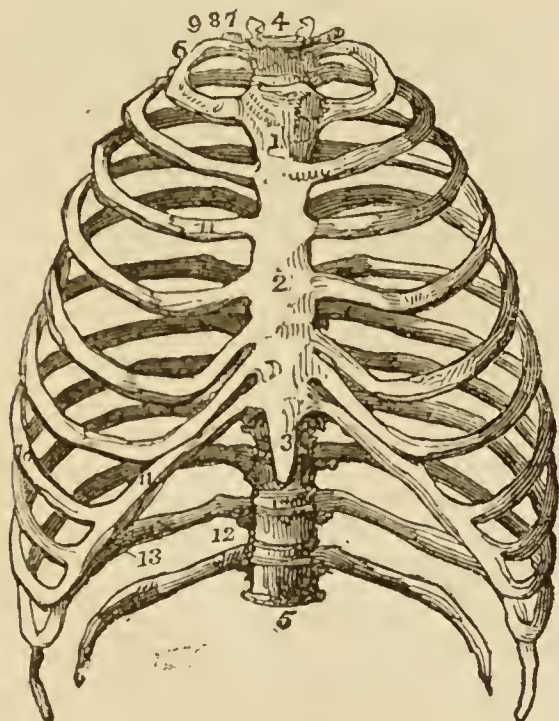
RHUS. The name of a genus of plants, of the order *Anacardiaceæ*, in which is the *R. Toxicodendron*, or Poison Oak, the leaves of which are very poisonous in large doses; they act in much the same manner as strichnia, and are sometimes given to arouse the nervous system in cases of local paralysis; also in obstinate skin diseases and chronic rheumatism: the dose of the Powdered Leaves is from 1 to 8 grains; of the Extract 1 grain; of the Tincture 5 drops, gradually increased; the forms of these are given in the Paris Codex.

RHYTIDOSIS (Greek *rytidos*, to grow wrinkled). A state of the cornea in which it collapses so considerably, without its transparency being affected, that the sight is much impaired, or quite destroyed. See *Eye*.

RIBS (in Latin *costa*, from *custodio* to guard). These bones form the chief defence of the lungs, heart, and other im-

portant organs situated within the chest, and therefore well deserve this title; they are divided into, 1st, the *True*, or *Sterno-Vertebral*, consisting of the upper 7 pairs, and so called because they are united by their cartilages to the sternum; 2nd, the *False*, or *Vertebral*, the remaining 5 pairs, which are successively united to the lowest true Rib, and to each other. The vertebral or back extremity of a Rib—that part which joins the vertebra, is called its *head*; the contracted part which joins it, the *neck*; at the back of the Rib is the *tubercle*; the outward part which bends forward is the *angle*; from which proceeds the *body*, passing forwards and downwards to the *sternal extremity*.

We thus see that the Ribs are twelve in number on each side, and a glance at the accompanying diagram will show what an



admirable case they form for the viscera of the chest, of which this gives an anterior or front view: No. 1 is the superior portion of the sternum, or breast bone; 2 is the middle, and 3 the lower portion of the same—this is called the *Ensiform cartilage*; 4, is the first dorsal vertebra, or joint of the back bone; and 5 is the last joint of the same with which the Ribs are connected; 6 is the first rib; 7 marking its head, 8 its neck, which rests against the transverse portion of the dorsal vertebra, from which it springs, and 9 its tubercle. The bones, it will be seen, continue to project gradually further and further, until they get to the 7th, or last true Rib (10), which is joined to the sternum, by what is called the costal cartilage (11), to a continuation of which

are attached all the false Ribs, except the last pair (12), which are called floating Ribs; these are shorter than the rest, and free at their extremities. Each Rib, presents an external and internal surface, the former being convex, and the latter flat; it is curved to correspond with the arch of the thorax, and twisted, so that when laid on a horizontal surface, one end is lifted up; the upper border of each is rounded, the lower sharp and grooved on its inner edge (13) for the attachment of the intercostal muscles. The whole arrangement bespeaks that nice adaptation of structure to special uses, which marks all the works of the all-wise Creator, and which are nowhere more conspicuous than in the human frame. Here we have a beautiful combination of lightness, with strength sufficient to resist great pressure; the muscular and cartilaginous attachments of the bones allow of sufficient expansion for the free play of the lungs, heart, &c., the force and regularity of whose movements can be distinctly seen by the rising and falling of the chest. For further particulars on this head see *Skeleton*. For treatment of *Fracture* of the Ribs see that head.

RICE. No grain, not even wheat, is more valuable to the human family than this, which, it has been asserted, affords sustenance to about three-fourths of the in-



habitants of the globe. The plant producing it belongs to the natural order *Gramineæ* or Grasses, and is scientifically termed *Oryza Sativa*. Whether it originated in India or Ethiopia is a matter of doubt, but it has now spread over the tropical and sub-tropical regions of both hemispheres;

there are now as many as 20 varieties of the plant known, and for all much moisture is a necessity of existence. The seed of the plant, deprived of its husk, is the Rice of commerce, before it is husked it is called *Paddy*. As an article of food, Rice is nutritious, easy of digestion, and therefore suited for weak stomachs; having no laxative properties, it suits those in whom there is a tendency to diarrhoea. In this country, it is used rather as an article of luxury than as a common aliment, although its use of late years has very much increased, especially since the spread of the potatoe disease, this grain being often taken as an accompaniment to meat instead of that vegetable. According to the analysis of Bryancon, Carolina Rice, which is the best, contains 85.07 per cent. of starch, 3.60 of gluten, 0.71 of gum, 0.29 of uncrystallizable sugar, 0.13 of fixed oil, 4.80 of vegetable fibre, 5.00 of water, 0.40 of saline substances. The small quantity of gluten which this grain contains prevents its being made into bread; it rapidly swells and softens under the influence of heat and moisture, and thus it is easily prepared for food, no grinding or baking process being required; it is therefore the food best suited for the people of tropical climates, not only because so little labour is required in preparing it, but also because it is easy of digestion, and is not heating and stimulating. That it contains all the ingredients necessary to build up a robust and hardy frame, may well be doubted, and perhaps the manifest inferiority in energy, and power of endurance, of the Asiatics, and other rice feeders, to the Europeans, and those who live chiefly on wheat, oats, and barley, which have more gluten in their composition, may be as much attributable to the character of their food as to the enervating influence of climate.

For young persons and invalids, nothing is so good in the way of puddings as those made of Rice. When intended to correct a tendency to relaxed bowels, it should be used ground. At all times care should be taken to have it well cooked, as it is indigestible if not so. Where there is an irritable state of the stomach and bowels, *Rice Water* is good taken as a drink. It may be prepared in the same way as Barley Water with this grain instead of barley; a little Lemon peel may be added to improve the flavour, and Gelatine or Isinglass to render it more binding.

RICINUS. This is the generic name of the *Palma Christi*, the plant whose seeds yield, by expression, *Castor Oil*, (which see).

These seeds are supposed to resemble the tick, in Latin *ricinus*, hence the term applied to the plant.

RICKETS. Derived, according to Dr. Good, from the Saxon *rieg* or *rick*, a heap or hump, particularly as applied to the back, hence *ricked*, or *ricket*, means hump-backed. This is a disease in which the bones have not their due proportion of earthy matter, and are, consequently, too soft and flexible to support the frame and perform the functions assigned to them. The cause is, sometimes, defective nutriment; the food has not in it a due proportion of nitrogenous matter; or it may be owing to the presence of scrofula in the system, or induced, it may be, by breathing impure air, and living in damp, dark habitations, or by hereditary taint. Rickets in children will generally be manifested when the first attempts to walk alone are made, the limbs twist and give way under the weight of the body, and there is no power of guidance; there will then, too, generally, be languor and palor, with loss of flesh and tumidity of the belly, and other indications of scrofula. Cod Liver Oil, good nourishing diet, chiefly Milk, Change of Air, Sea Bathing, and such means of invigorating the system, are the proper remedies. Attention should be paid to any apparent distortion of the limbs or spine, and means taken to correct such tendencies, or they will become permanent. Young females under treatment for Rickets should be lying down as much as possible, lest the pelvis should become distorted, and incapacity of child-bearing ensue. For further account of treatment, see *Scrofula*.

RIGOR (Latin *rigeo*, to be stiff). The shivering which precedes the inflammatory stage of any disease, especially fevers, is so called; it sometimes occurs in states of the body in which there is neither fever nor inflammation, and is a common symptom of a bilious attack; it also occurs during the passage of gall-stone or gravel, at the commencement of labour, and it may be excited by certain sounds of a rough or grating character, such as are said to "set the teeth on edge." This renders it probable that the sensation is a purely nervous one, a kind of alarm signal of something unpleasant or dangerous impending.

RIMA (Latin for a fissure). Hence the term *Rima Glottidis*, applied to a fissure of the glottis, the opening between the *chorda vocales*.

RING FIXED. For directions for removing a ring, which has become fixed on

the finger by reason of the swelling of the joint or skin, see *Finger*.

RINGWORM. The common designation of a kind of skin disease called by Bateman *Herpes circinatus*. It appears in small circular patches, in which the vesicles arise only around the circumference. Ringworm of the scalp, or Scalled Head, which is the *Porrigio scintillata* of Bateman, appears in distinct, and even distant patches of an irregularly circular form upon the scalp, forehead and neck; this is sometimes distinguished as *pustular* Ringworm, the first named kind being *vesicular*.

The latter form is the most obstinate and troublesome, in it the scaly pustules are clustered together in elevated patches; a roughness and discolouration of the skin generally precedes the appearance of the pustules, which are of a brown tint in one variety, of a straw colour in another; in the latter case the scales or crusts after a while fall off, leaving a number of small cap-shaped ulcers, clustered together like honey-comb; these spread very quickly, sometimes involve the whole scalp, and even extend to the neck and forehead.

Ringworm has its seat in the roots of the hair, and is believed to be attended by the growth of parasitic fungi; its predisposing causes are any derangement of the general health from ill or under feeding, breathing impure air, drinking bad water, uncleanly habits, scrofula. Its immediate or exciting cause is generally contact with those affected with it, or using combs or hair brushes which they have used.

Mr. Erasmus Wilson, who remarks "that improper food is a frequent predisposing cause, and that he has observed it in children fed too exclusively on vegetable diet," recommends in the way of *treatment* that as soon as the irritation appears to be subdued by soothing means, such as Warm Poultices, &c., an Ointment composed of 1 drachm of Sulphate of Zinc to 1 ounce of simple Cerate, using also a Sulphate of Zinc Lotion. The head, from which the hair has been previously removed, by shaving or close cutting, should be washed with soap once a day, and after being dried, anointed with Pomatum so as to keep the scalp moist with oleaginous matters. Dr. A. Thomson says "that the application which he has found most beneficial is a solution of 1 drachm of Nitrate of Silver in $\frac{1}{2}$ an ounce of Diluted Nitric Acid. The diseased circles, after the scalp has been shaved, to be pencilled over with the Solution, and in 10 or 15 minutes afterwards the parts should be well sponged, first with tepid water, and then covered with pledgets of lint

dipped in cold water, and the evaporation diminished by covering the wet linen with oiled silk." He also says, "that in India an Ointment composed of a drachm of Powdered Nut Galls, a scruple of Sulphate of Copper, and an ounce of Simple Cerate, is said to prove most beneficial."

Indeed, almost any astringent application will be found serviceable in this disease. We have seen Pyroligneous Acid used with great advantage, and Black Ink, which contains Galls and Sulphate of Iron. Tar and Creosote are both recommended, and may be serviceable; but they are disagreeable applications, the former especially so, and certainly not better than many others which have not this objection; we should recommend their being used only as a last resource when the disease is very obstinate, as is sometimes the case. Rubbing the raised parts lightly with Sulphate of Copper, previously moistened, or washing them with a strong Solution of Nitrate of Silver, or Concentrated Acetic Acid, are the local applications on which we are disposed to place most confidence; and for general or constitutional treatment we would recommend a tolerably generous diet with Quinine or Iron tonics, after the system has been cleared by a course of mild aperients and alteratives, such as Rhubarb and Grey Powder, say three doses, according to age, one every other night, using any other means that may suggest themselves to strengthen and invigorate the patient.

The vesicular form of Ringworm is the simplest and most amenable to treatment, sometimes it disappears after careful washing and poulticing, with, perhaps, a few applications of any astringent lotion; but the pustular form is far more troublesome and intractable, spreading often very rapidly, and running into ulcerous sores, and sometimes reappearing when it is thought that a cure has been effected. Nothing but the greatest care and attention will then eradicate it. Any child afflicted with this disease should be separated from other children, on account of its contagious nature; wearing each others caps and bonnets will be likely to spread it through a whole school.

RISUS SARDONICUS. A species of convulsive laughter, sometimes, especially in children, closely resembling a natural and healthy smile, but more frequently amounting to an absolute distortion of the face; it is caused by some uncontrollable action of the risible muscles, and has no doubt a nervous origin.

RIVER BATHING. This is not so salutary as Sea Bathing, and should not be indulged

in to anything like the same extent, unless, of course, it is a tidal River with salt water, in which the saline particles have a stimulating effect upon the skin, causing that pleasant glow which is indicative of healthy re-action: in the absence of the salt this effect may be partially produced by friction, which should always be vigorously employed after Fresh-water Bathing.

ROASTING. This is one of the primitive methods of cooking meat, and, if properly done, it is perhaps the best; during the process, much of the fat which renders meat indigestible is melted out, and the watery parts are evaporated; coagulation of the albumen takes place, and the gelatine, much of which in boiling is lost, is in this case retained. Over-roasting, however, impairs the nutritive properties of meat, which, when underdone, if more nutritious, is certainly less digestible. Liebig, in his *Chemistry of Food*, recommends that the joint to be Roasted, should be enveloped with a covering of lard; by this means, he says, "the sapid constituents of the flesh by its juices, and the evaporation of the water, which causes hardening, are prevented, and the surface, as well as the subjacent parts, are kept in the tender state which is otherwise only found in the inner portions of large masses of flesh." If the joint is kept well basted the effect will be the same.

ROBORANT (Latin *roboro*, to strengthen). An old term for a strengthening medicine.

ROCHE ALUM, or **ROCK ALUM**. A variety of the Sulphate of Alumina, originally brought from Rocco, formerly called Edessa, in Syria; it has a reddish tint, but does not differ in its properties from the common sort, an artificially coloured preparation of which is generally sold under the above name. See *Alum*.

ROCHELLE SALTS. The Tartrate of Potash and Soda used medicinally as a mild aperient; it was first found in a native state at Rochelle, hence its name: it has not the nauseous taste of the Epsom or Glauber Salts, and is therefore useful in cases which require a saline aperient, and in which they cannot be taken; it forms the active component of Seidlitz Powders, and may be safely given to children with Infusion of Senna; the dose is from 1 drachm to 1 ounce; it is well suited for cases of calculus, jaundice, and puerperal fever. See *Soda*.

ROLLER. A long broad ligature used in surgery for keeping the parts of the body in their proper places. See *Bandages*.

ROS CALABRINAS (Latin for Dew of Calabria). An old designation for the *Officinal Manna* (which see).

ROSA. The name of a genus of plants of the natural order *Rosaceæ*. Three species of this genus are used medicinally, viz. the Dog Rose (*Rosa Canina*), which is found growing wild in our hedges, and of which a cut will be found at p. 6, where we have alluded to the fruit under their common name *Hips*. The Confection of this fruit, which is acidulous and refrigerant, is sometimes given in diarrhoea and dysentery. The Cabbage or Hundred-leaved Rose (*Rosa Centifolia*) is that of which Rose Water is made, either by distillation from the leaves, or by mixing with water the volatile oil previously obtained by distillation; it is an agreeable vehicle, much used in lotions and colliria; from the petals also a Syrup is



sometimes made, which is slightly laxative. From the Damascus Rose (*Rosa Damascena*), a variety of this species, is obtained the delicious perfume Otto, or Attar of Roses, so celebrated through the East, and valued in all civilised lands. The red or French Rose (*Rosa Gallica*) it is whose petals are used for making the Infusion of Roses, which is an elegant vehicle for many active remedies, and is given with advantage in the sweats of phthisis, and with additional acid, and Nitrate of Potash, in uterine and pulmonary hæmorrhages, and used topically as a gargle in throat affections which require an astringent application. *Honey of Roses* is also prepared from the leaves or fresh buds of this species, which, mixed with Borax, is a good application for the mouth in aphthra or thrush.

Infusion of Roses is made as follows:—

Dried Rose Leaves, 3 drachms, on which pour boiling Water 1 part ; then add dilute Sulphuric Acid, $1\frac{1}{2}$ drachms ; macerate for half an hour in a covered vessel ; then strain, and add lump Sugar 6 drachms.

ROSAIC ACID was the name given by Proust to a peculiar acid, which was said to exist in the lateritious sediment deposited from the urine in some stages of fever.

ROSALIA was the ancient and classical term for the disease now called *Scarlatina* (which see).

ROSEATE POWDER. A depilatory composed of 1 ounce of Orpiment and 10 ounces each of Quick lime and Starch : said to be good for removing superfluous hair from any part of the body, but dangerous to use on account of its poisonous nature. See *Depilatory*.

ROSEMARY. The *Rosmarinus Officinalis*, of the natural order *Labiata*, is a plant whose flowers and tops are sometimes used medicinally ; they have a fragrant odour and bitter taste, and stimulant and carminative properties, and make an agreeable addition to more active medicines ; the dose of the



Oil is from 2 to 3 drops, as a carminative ; the Spirit is sometimes added to lotions and liniments.

ROSEOLA or *Rose Rash* is a rose coloured effluence on the skin, generally of a

circular or oval shape, without wheals or papulae, occasionally fading and reviving ; it is non-contagious. Bateman distinguished seven distinct species, which we will not particularize, as the difference between them is not essential. Rose Rash most commonly occurs in children, it is not dangerous, and seldom requires any medical treatment beyond a little cooling aperient. We may here remark that the term *Rosy Drop* has been applied to the *Acne Rosacea* of Bateman, commonly called Carbuncle Face, (see *Acne* ;) and that *Rose* was an old popular name for *Erysipelas*, (which see).

ROSIN. A substance obtained from different species of pines. See *Resin*.

ROTATOR (Latin, *rota* a wheel). A muscle whose office it is to turn or wheel about the thigh.

ROTULA (Latin, *rota* a wheel). Literally a little wheel ; applied to the Kneecap. See *Patella*.

ROUGE. A pigment formerly much used for painting the cheeks ; it was commonly prepared from the dye called Safflower. The artificial colour now generally employed is Carmine.

ROUSSEAU'S DROPS. A nostrum for coughs and all complaints which require an anodyne ; which was at one time in high repute, especially in France, it was made thus :—Honey 12 ounces, warm Water 3 pounds ; boil together : then add :—Opium 4 ounces, Water 12 ounces, Alcohol $4\frac{1}{2}$ ounces, previously digested together and filtered.

ROYAL STITCH. The name of an old operation for the cure of bubonocoele ; it consisted in putting a ligature under the neck of the hernial sac, close to the abdominal ring, and then tying that part of the sac, so as to render it impervious by the adhesive inflammation thus excited.

RUBEDO (Latin *rubeo*, to be red). A diffused redness like that of blushing, observable in some kind of *Skin disease*.

RUBEFACIENT (Latin *rubefacio*, to make red). A substance which, when applied to the skin, produces redness without blistering ; it excites pain and inflammation, but in an inferior degree ; no vesicle is raised and no fluid discharged ; it is useful to allay local inflammation. The most commonly used Rubefacients are Ammonia, or Heartshorn, Friction or Heat, Mustard, Spirits of Wine, or Turpentine.

RUBEOLA (Latin *rubor*, red). An eruption of crimson stigmata, or dots grouped in irregular circles or crescents, occurring for four days, and terminating in minute furfuraceous scales. Bateman distinguishes

three species of this disease, which he calls severally Common, Imperfect, and Black *Measles* (which see).

RUBULA (Latin *rubus*, a blackberry). A name applied by Dr. Good, as more elegant and appropriate, to the disease commonly called *Frambæsia* or *Yaws* (which see).

RUE. The *Ruta Graveolens* of botanists, belonging to the natural order *Rutaceæ*, was of old valued for its medicinal properties, although it has now fallen very much into



disuse. Ordinarily it acts as a stimulant and antispasmodic; but in large doses it is narcotic, so much so that cases of poisoning by the plant have occurred. It is useful in some kinds of hysteria, but is more especially so in flatulent colic, administered by the mouth, or as an enema. It is likewise employed as an emmenagogue, and has been found useful in infantile convulsions; it is also given as a vermifuge. The dose of the Powdered Leaves is from 10 to 20 grains; the Fresh Leaves are more active, the expressed juice of them may be given in $\frac{1}{2}$ drachm doses; of the Oil rubbed up with Sugar and Water, from 2 to 5 minims is the dose; of the Confection, from 1 scruple to a drachm; of the Tincture, from $\frac{1}{2}$ to a drachm (for adults); of the fresh Juice, from $\frac{1}{2}$ to a drachm (for children).

RUM. This is the spirit obtained by distillation from the juice of the sugar cane; when genuine, it contains about 53 per cent. of alcohol. When new, this spirit is sometimes impregnated with lead from the worm of the still in which it has been made; in this case it may give rise to symptoms of colic. Rum is often recommended to be taken for colds, but we do not

believe that it possesses any advantages over other alcoholic stimulants, the use of which is often more likely to do harm than good, by increasing inflammatory action.

RUMEX. The name of a genus of plants of the natural order *Polygonaceæ*, some species of which are remarkable for the acidity of their leaves; these are the Sorrels from which oxalic acid is obtained. See *Acetosella*.

RUMINATION. A voluntary regurgitation of food for further mastication, peculiar to the ox, sheep, and other animals having several stomachs; it is commonly called *chewing the cud*.

RUPIA (Greek *rupos*, filth). Sordid Blain. An eruption of flat distinct vesicles, with the base slightly inflamed; containing a serous fluid; scabs accumulating sometimes in a conical form, easily rubbed off, and soon reproduced. Bateman distinguishes three species, Simple, Conical, and Cachectic Rupia. The disease often originates in a debilitated constitution, sometimes in syphilis. See *Skin Disease*.

RUPTURE (Latin *rumpo*, to break). A protrusion of some part of the abdominal viscera, but principally the intestines. Under the head of *Hernia* (which see) we have already described the different kinds of rupture which are likely to occur. We will now speak of the general symptoms and mode of treatment; and before doing this, let us again call the attention of our readers to the four chief varieties of Rupture:—1st, *Inguinal*, which is in the groin above the fold, in such a position that it would be intersected by a line running from the hip to the pubis. 2nd, *Femoral*, which is below the fold of the groin, at the upper part of the thigh. 3rd, *Navel*, or *Umbilical*. 4th, *Ventral*, occurring at the side or middle of the belly, below the navel. The first of these is the most common form of Rupture; next in frequency is the second; the third is not uncommon with children at birth; nurses call it “starting of the navel;” (the proper treatment is described under the heads of *Infant* and *Navel*). This also sometimes affects stout elderly persons, especially females who have borne many children. It has been clearly established that about one out of every ten men is ruptured; in women the proportion is not nearly so great, as their avocations generally involve less muscular exertion. With them the femoral form is most common.

Symptoms and Treatment.—A swelling, probably at first very small, shows itself in one or other of the situations above named.

It is not painful, nor are there signs of inflammation about the spot ; if it recedes on pressure, or on a recumbent position being assumed, the patient may be pretty sure that it is a Rupture ; if, on pressing it back, there is a gurgling noise, it contains intestine only, but when omentum also is projected, there will be a solid doughy kind of feel. Persons are often ruptured for some time without being aware of it. They will perhaps experience uneasy sensations about the pit of the stomach, a kind of dragging, with slight nausea ; on their having occasion to make some great exertion that hitherto undiscovered lump will become more prominent, and force itself upon the attention, and there may, or may not be, sickness and vomiting until it is returned into the abdomen, which it generally can be with a little careful manipulation. The object then is to secure such an amount of pressure over the orifice of escape as to prevent its protruding again ; and this can only be done by a truss of some kind. The patient is never safe without one ; and, as it is of the utmost consequence, both to the comfort and safety of the wearer, that the instrument should be exactly suited to the case, it is best to resort at once to an experienced surgical mechanist for a supply of this essential article. Under the head *Truss* we shall speak more fully of the different forms recommended, and modes of application. At present we confine ourselves to some directions for the treatment of Hernia, apart from those connected with the instrument to be worn. First, then, the part should be sponged night and morning with cold water, and if it gets chafed or abraded, it should be dusted after each sponging with Starch powder or Flour. A regular action of the bowels is essential to the safety of ruptured persons, as the violent medicines necessary to relieve a state of costiveness will be likely to increase the Rupture to a dangerous extent. Castor Oil, or some other gentle aperient, should be taken as often as may be necessary to ensure a daily motion without much straining.

One of the tendencies of this affection is to cause a deficient action of the bowels, and when these are much confined, and there is a sense of constriction about the middle, and vomiting of feculent matter, an examination should always be instituted, to ascertain if Rupture has not originated this train of symptoms. It may happen with ruptured persons who do not wear a truss, and also with those who do, if the instrument is not quite suited to the case, that

the protruding gut or omentum may become so large that there is much difficulty in getting it back, or reducing the Rupture, as we should say ; if the patient cannot, by lying down on his back, and gently pressing it up through the aperture, accomplish this, the aid of a surgeon should be obtained, if possible : should it not be, a warm bath may be first tried, keeping the patient in until he feels faint, so as to relax the muscles ; he should, during this time, repeatedly renew the efforts above directed. If this fails, apply pounded ice, in a bladder, to the part, or a freezing mixture, composed of Table Salt, Saltpetre, and Sal Ammoniac, in equal proportions, with a little water added, just enough to make it liquid. If neither of these can be readily obtained, intense cold may be produced by means of wet rags laid over the swelling, and evaporation encouraged by a continual stream of air from a pair of bellows directed upon the rags, which should be frequently rewetted.

Sometimes the return of the Rupture may be accelerated by a reversal of the position of the body, placing it on an inclined plane with the head downwards. Bleeding to faintness while standing up, and then lying down, has sometimes succeeded, but, of course, only a surgeon could attempt this. Should all means fail, we have what is called *Strangulated Hernia*, and an operation is necessary ; this is always attended with considerable danger. When Rupture of the groin occurs with young children, nothing can be done for the first three months or so, but to keep the child as much as possible in a recumbent position, and sponge the part frequently with cold water ; at the end of the above period a light instrument may be worn (see *Trusses*), with every prospect of a cure, if proper attention is paid to the case. When a person about forty years of age becomes ruptured, there is little chance that a cure will be effected, although by constant pressure on the part, with an avoidance of violent exertion, the size of the Rupture may be greatly reduced.

RUSKS are a kind of light cake made of fine flour, highly baked ; like biscuit powder, and tops and bottoms, they make an excellent infant's food ; they should be boiled in water for a quarter of an hour, then, after the water has settled and been poured off, rubbed through a sieve, warmed up again with a little milk, and sweetened slightly.

RUSSIAN BATH. This is a sudden transition from a hot Vapour Bath to a cold plunge, or pumping on the body ; it has been sometimes recommended as highly

invigorating, but would not do for persons in delicate health, and should never be resorted to unless under medical advice.

RYE. This is one of the *Gramineæ* or grasses, whose cultivation has been of inestimable benefit to man; its botanical name is *Secale Cereale*; it produces a nutritious flour containing less bran and more farina than that of wheat, than which however it is darker in colour. It is not so nutritious as wheat; but, to the hardy dwellers in northern countries where it grows freely, it furnishes excellent food; it is said to have the property of slightly stimulating the action of the bowels. Much spirit is distilled from this grain, which dried and roasted when ripe, is sometimes used instead of coffee; when peculiarly affected by a disease, it becomes decidedly medicinal. See *Ergot*.

S or SS is put on prescriptions immediately after a quantity, for the Latin *semis*, a half: thus ʒiiss signifies an ounce and a half.

SABADILLA, sometimes called *Cevadilla*. A name given to the small brown follicles and seeds of two plants, viz. the *Veratrum Sabadilla* and *Asagraea Officinalis*, of the first of which we give a cut. They both belong



to the natural order *Melanthaceæ*; their seeds are very bitter, and contain an acrid principle, called *Veratrine* (which see); these seeds act as drastic purgatives and emetics, and are sometimes given to expel worms; they are highly poisonous, and

should be administered with great caution; the ordinary dose is from 5 to 10 grains in powder. Veratrine is sometimes alluded to under its original name of *Sabadilline*.

SABATIA ANGULARIS, or *American Centaury*, belongs to the natural order *Gentianaceæ*; it resembles the other gentians



in its bitter taste, and its tonic properties. It is popularly used in America, where the plant is very plentiful, as a remedy in fevers, both intermittent and remittent; although not so active as cinchona, it is useful for promoting appetite, and assisting digestion in convalescence from any kind of sickness.

SACCHARUM. Latin for *Sugar* (which see). *Saccholactic* or *Saclactic* is a compound of the above term, and *lac*, milk. It is applied to an acid which was first obtained from the sugar of milk; it is now generally called *Mucic Acid*. Its salts are *Saclactates*.

SACCULUS. Diminutive of the Latin *saccus*, a bag. Applied to the minute vesicular bags, constituting the adipose membrane or tissue; these vesicles have been called the *Membranous sacculi*, and the *Sacculi pinguedinosi*. See *Fat*.

SACER (Latin for sacred). A term formerly applied to certain diseases which, on account of the suddenness of their attack, were supposed to be inflicted direct from heaven; such was the *Sacer morbus*, or *Epilepsy*, and the *S. ignis*, or *Erysipelas*.

SACRUM (Latin for sacred). This term is applied to the bone which forms the basis of the vertebral column (see *Pelvis*), because

it was in ancient times commonly offered in sacrifices to the gods. A muscle arising from this bone, and the roots of the transverse processes of the lumbar vertebræ, which is inserted into the inner and outer sides of the ribs, is called *Sacro-lumbalis*.

SAFFLOWER, or Bastard Saffron, is the flower of the *Carthamus Tinctorius*, of the natural order *Compositæ*; a native of Egypt and the Levant. It furnishes two very important principles in dyeing, one of which is called *Carthamine*, or *Carthaminic Acid*, which is a beautiful rose colour, and prepared with finely powdered talc, forms rouge, sometimes used to restore the faded



bloom of ladies' checks. Safflower has been employed in domestic practice as a substitute for saffron, to promote the eruption in measles, scarlatina, &c. The seeds are slightly purgative, and have been found beneficial in dropsy.

SAFFRON. The drug so called is the stigmas of the *Crocus Sativa*, described and pictured under the head *Crocus*. It is sold in the shops in the form of a dark-coloured moist cake, but more commonly dry, resembling dark yellow threads. It was at one time a favourite stimulant and antispasmodic, and is still often given in the early stages of measles and scarlatina, under the impression that it will hasten the eruptive process. It is chiefly used, however, as a colouring ingredient for pastry, confectionery, and liqueurs; it is also given to cage-birds when they are moulting, or otherwise sickly, a few threads being infused in the water which they drink.

SAGE. The common garden Sage (*Salvia Officinalis*), of the natural order *Labiata*, is a plant possessed of tonic properties, as its aromatic odour and bitter taste indicate; an Infusion made of its leaves and



flowering tops is often taken under the name of Sage Tea, and is tonic and astringent; as a gargle, with Vinegar, or Honey and Alum, it is beneficial in inflammation of the throat, or relaxed uvulæ. The volatile Oil, with which the plant abounds, is sometimes prescribed in doses of 1 or 2 drops, and is also used as an ingredient in embrocations for rheumatism; preparations of the plant are used to abate the sweating in hectic fever: the dose of the powdered Leaves is from 20 to 30 grains.

Another species of Sage, called *S. Sclarea*, commonly called *Clary*, has a pleasant odour, much like that of Balsam of Tolu, and is used for seasoning soups, &c.; it has antispasmodic and cordial properties.

SAGAPENUM. This is a gum resin, yielded either by the *Ferula Persica* or *F. Szowitziana*, both umbelliferous plants. It takes an intermediate place between assafoetida and galbanum with regard to its stimulant properties and garlicky odour. It was formerly held in considerable estimation as beneficial in asthma, hysteria, hypochondriasis, and as an emmenagogue, but is now nearly discarded from modern practice.

SAGITTALIS (Latin *sagitta*, an arrow). A name given to the arrow-like suture of the *Cranium* (which see).

SAGO. This is a kind of fecula prepared from the pith of several species of palms, especially those of the genus *Sagus*, and more especially of that particular species called by botanists *Sagus Lævis* (see cut),



which grows about 30 feet high, and from 18 to 20 feet in diameter, forming immense forests in nearly all the Moluccas. Each tree is said to yield from 100 to 800



pounds of this nutritious farina, which is invaluable as a light wholesome diet for invalids and children. The granular form is

imparted to it by passing it when half dry through a coarse sieve. The process of refining and imparting to it a pearly lustre is a Chinese invention; thus prepared, it is called Pearl Sago. This is a more elegant, but perhaps not a more nutritious form of the article than the browner and coarser kinds. Sago is made into puddings, boiled in milk, and cooked in a variety of ways; it is nearly a pure *Starch*, and will be again alluded to under that head. The Prickly Sago Palm (*Sagus Rumphii*) is the tree which yields the sago commonly eaten by the natives of India. Of this we also give a cut.

SALACINE (Latin *salix*, a willow). This is a peculiar bitter principle discovered in the bark of several kinds of willow trees, and also in that of the poplar; in its properties it resembles quinine, for which it has been used as a cheap substitute. It does not, however, exert so decidedly specific an effect in intermittent and neuralgic affections as quinine, although, as a simple tonic, it is in many cases more excellent, because less likely to heat and cause headache. When the alkaloid in a prepared form cannot be obtained, an Infusion of the willow-bark may be given. The dose of the Salacine, as a febrifuge, is from 10 to 20 grains; as a tonic, 2 grains will be sufficient; in Sherry Wine, if a stimulant is required. An ointment made of the leaves of any kind of *Salix* has been recommended as a dressing for foul ulcers. See *Willow*.

SALEP. This is a substance much used as a nutritious food in the East, and to some extent also in this country; it consists almost entirely of a peculiar gummy substance called bassorin, and starch, and is considered to be more nutritious than either sago or arrow-root; well prepared, it is, no doubt, one of the best articles of diet that convalescents can use. From the common meadow and male Orchis, and some other species of British Orchids, it is said that Salep may be prepared equal to that which is imported. The method of making it has been thus described by Mr. Moulton in the "Philosophical Transactions:" The best time to gather the tubers is when the seed is formed, and the stalk is going to fall, for then the new bulb of which Salep is made, is arrived at its full size. The new roots are washed in water, the outer skin removed, and then set on a tin plate, in an oven heated sufficiently to bake bread. In six, eight, or ten minutes they will have become semi-transparent, like horn, without any diminution of size. Then remove them from the oven, and place them in a room to

dry and harden, which they will do in a few days; or this process may be effected by the application of a slow heat in a few hours. The roots should then be powdered or ground in a mill, and put into canisters, and so kept dry.

SALIFIABLE BASE (Latin *sal*, a salt, and *fit* to become). Any substance which forms a definite compound with an acid, and which, when liquid, or in a state of solution, has an alkaline reaction. Lavoisier denominated the acid, of whatever kind it might be, the *salifiable principle*.

SALINE DRAUGHT is made with 1 scruple of Carbonate of Potash, 15 grains of Citric or Tartaric Acid, $\frac{1}{2}$ a drachm of Essence of Cinnamon, 1 drachm of Syrup of Orange Peel, and 10 ounces of Water; shake up, and drink while sparkling; a wineglassful as a refrigerant. To make it effervescing, add the Acid after the draught is poured out, or a tablespoonful of fresh Lemon Juice. See *Beverages*.

SALIVA. The fluid secreted by the salivary glands, the chief constituent of which, according to Tiedemann, is muriate of potash; 7 parts in 100 is said to be the whole solid contents of this fluid, all the rest being water.

Of the *Salivary Glands* there are six in all, three on each side of the mouth; and from these issue what is commonly termed the *spittle*, or more properly, the *Saliva*, which, according to Dr. Wright, who performed a number of interesting experiments with the view of determining the influence of this substance on the digestive powers, "has the power of modifying, and to a certain extent of digesting, vegetable and animal substances." He also came to the conclusion, "that it has a more powerful action upon vegetable than upon animal matters; that acids or alkalies added to saliva diminish or destroy its digestive properties; that the presence of Saliva in the stomach is essential to healthy digestion."

By this we may learn how necessary it is when taking food to do so slowly, and with sufficient mastication, so that a due quantity of Saliva may be mixed, and swallowed with the food. It has been noticed by the above-named experimentalist that after a full meal the Saliva becomes more strongly alkaline, and that the effect of spitting it out instead of swallowing it, was to produce griping and other symptoms of acidity; leading to the inference that this excess of alkali is intended to neutralize the acid likely to be evolved in the process of digestion.

There can be little doubt that the indigestion which is so common in Ame-

rica, is in part attributable to the general habit of spitting, or wasting the salivary secretion, which has an important part to perform in the digestive functions, and which is thus diverted from its proper purpose. Excessive smokers in this country are also commonly dyspeptic, probably in a great measure from the same cause. It is very curious to notice, when hunger is excited by the sight and smell of savoury viands, how immediately an increase takes place in the flow of Saliva; then, as the common phrase has it, "the mouth waters," in anticipation of the masticatory process, and an ample supply of the fluid so necessary to its due performance, is ready. Under the influence of fear, and other powerful emotions of the mind, that secretion is much diminished, so that the mouth becomes parched, and dry. Any irritation of the stomach acts powerfully on the salivary glands, causing an increase of the secretion, which, being swallowed, probably assists in allaying that irritation. During sleep, the flow of Saliva appears to be nearly or altogether suspended, unless there is some active disease going on to stimulate the organs. The quantity of Saliva secreted during 24 hours has been estimated at from 15 to 20 ounces; but it is difficult to ascertain this with any degree of precision. By keeping them moist, and, as it were, lubricated, there can be no doubt that the Saliva greatly facilitates the movements of the organs of mastication and speech. The tartar, which collects about the teeth, is a deposit of earthy and animal matter from this fluid.

SALMON. This is one of the oily fishes, and is therefore somewhat indigestible, and unsuitable for invalids and delicate persons.



Eaten, as it sometimes is, when pickled in a state of partial decomposition, it is likely to act as a poison. When good and fresh it is nutritious to those who can digest it, and

no harm is likely to result from an occasional meal of it. See *Fish*.

SALTPETRE. This is the common name for the Nitrate of Potash, which is also sometimes called *Nitre* (which see), and *Potash*; when fused by heat, and run into moulds it is called *Sal prunella*.

SALT. This term, as we have already shown, is applicable to saline matter generally; but in its common application we understand it to mean the muriate of soda, or common table Salt, which, as a condiment, and used in moderation, is beneficial to man, who, in common with the lower animals, appears to have an instinctive desire for it. There can be no doubt that Salt greatly assists the process of digestion; it is one of the constituents of the blood, and of the body generally, and we find that where it is denied, the digestive powers are weakened, and the general tone of the system is impaired. It has also been observed, that those who do not take Salt are especially liable to worms in the intestines. Hence the desirability, if not the necessity, of insisting that children should eat a certain proportion with their food. On the other hand, if taken in excess, it is productive of mischievous results, as we have observed under the head of *Scurvy*. As a medicinal agent Salt occupies an important place; in some cases of convalescence we find an intense craving for it; and this should be indulged, but not to an immoderate extent, as it appears to have a tonic effect. It is sometimes administered as a domestic emetic in solution—2 ounces being dissolved in half a pint of warm water; occasionally, however, when so administered, it acts as a powerful purgative. Such a solution, thrown up as a clyster, destroys and brings away worms from the large bowels. Some advocate the use of Salt in the treatment of typhus fever and cholera, and some have even held it up as a panacea, or universal remedy; while there are not wanting those who attribute to its use nearly all the ailments to which man is liable. Into these theories we need not enter.

As an external application it exerts a tonic influence, and is highly beneficial in cases of debility, whether local or general. The Salt Water Bath braces and stimulates the system, and Warm Saline Bathing and rubbing is good for rheumatic affections, sprains, &c.; if prepared artificially, about a pound of Salt to three Gallons of Water is a proper average strength. The "Brandy and Salt," so highly vaunted some years since, is, no doubt, an excellent stimulant application, but not better than many others.

With regard to the preservative properties of Salt on animal substances, we may observe that the chemical change which it effects in the juices of the meat, to which it is applied, considerably modify the nutritive properties, and render it less fit to nourish and sustain life; hence fresh meat is better than that which is preserved by salting, which should never be taken as a staple article of diet if it can be avoided.

SALTS. (Latin *Sal*.) A Salt may be described as a definite compound of an acid, with an alkali or a salifiable base. Salts are very numerous; a mere list of their Latin and English names would occupy several pages of our space, and to no good purpose. A few brief remarks, however, upon their general characteristics and particular uses will be necessary. First then, let us observe that they are distinguished by certain significant prefixes, as thus:—*Super* denoting excess of acid in general, as Supernitrate of Potash; *Sub* denoting excess of the alkaline base, as Subborate of Soda; *Bi* denoting two equivalents of acid, as Bisulphate of Potash; *Quadr* denoting four equivalents of acid, as Quadroxalate of Potash; *Sesqui*, one equivalent and a half of acid, as Sesquicarbonate of Ammonia; *Oxy*, denoting the presence of a perfect oxide, as Oxymuriate. Salts are also distinguished according to their affinity for water, the effects of heat, the proportion of their compounds, &c.: thus *Deliquescent Salts* are those which attract moisture from the air, and soon become liquid; such as the Nitrates of Lime and Magnesia. *Efflorescent Salts* are those which lose a portion of their water of crystallization and fall into powder by exposure to the air—such as the Phosphate and Sulphate of Soda; by the application of a strong heat the whole of the water is expelled, and the salt, if soluble, is dissolved, undergoing what is called watery fusion. *Decrepitating Salts* are those which burst, when heated, with a crackling noise, into smaller fragments, such as the Nitrates of Barytes and Lead. *Neutral Salts* are those in which the base is perfectly saturated with the acid. *Double Salts* are those which are composed of one acid and two bases, or two acids and one base; or of two different acids and two different bases; these were formerly called *Triple Salts*.

Another mode of distinguishing Salts is according to the process of preparation; thus Common Salt, which is properly a Muriate of Soda, is procured by evaporation from sea-water, or from the produce of brine springs. *Essential Salts* are procured from the juices of plants by crystallization. *Fixed*

Salts are prepared by first calcining, then boiling the matter in water, straining off the liquor, and evaporating the moisture, when the salt remains in the form of a powder.

Volatile Salts are procured chiefly from animal substances, or the fermented juices of plants. By the term *Salts* used by druggists is generally understood the Sulphate of Magnesia, or Epsom Salts ; of this and all the Salts used medically a description will be found under the heads of their several acid or Alkaline bases ; for instance, Glauber's Salts, Sulphate of Soda, under the head *Soda* ; Rochelle Salts, Soda-Tartrate of Potash, under the head of *Potash*.

SALUTARY DETERSIVE DROPS. A nostrum at one time much recommended in syphilis and skin diseases ; its base is corrosive sublimate.

SALVATELLA (Latin *salveo*, to preserve) A vein of the foot, so called from an old notion that by bleeding from this vein the health might be preserved, and melancholy dissipated.

SALVE is the common name for an ointment, as Eye-salve, Lip-salve, &c.

SAMPHIRE. This plant is the *Crithmum Maritimum* of botanists, belonging to the order *Umbelliferae* ; it is found abundantly



on some of the rocky cliffs of the British coast ; it is odorous, and has a hot, aromatic, and slightly saline taste ; it is considered diuretic, and was formerly much esteemed as a condiment, and is still thought to make an excellent pickle.

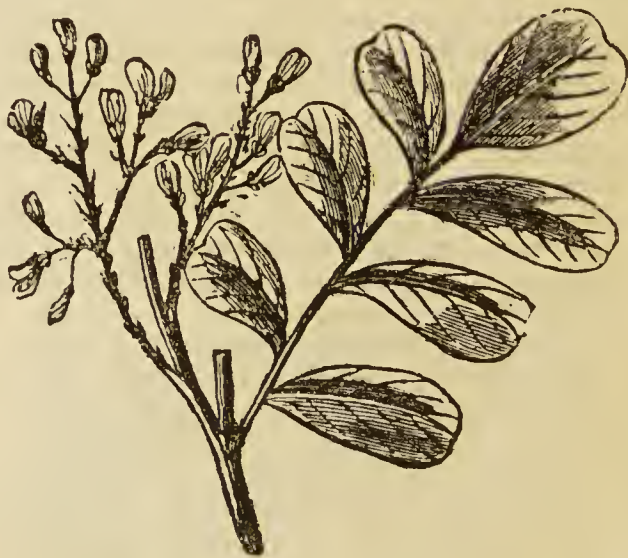
SANDAL, or *Red Saunders Wood*. The wood of the *Pterocarpus Santalinus* of bota-

nists, belonging to the order *Leguminiferae* (a native of India). Yields a fine red dye, which is owing to the presence of a peculiar principle called *Santalin*. It is sometimes



used by the Arabs as an astringent, but in this country is only employed for dyeing, as a basis for dentifrice mixtures, and to impart a red colour to tinctures, &c.

It is another tree of the same genus,



Pterocarpus Marsupium, that yields, as some suppose, the astringent gum Kino (which see).

SANGUIS. Latin for blood. Hence we

have the terms *Sanguinification*, the process by which the chyle becomes converted into blood; *Sanguinaria*, a vegetable alkali, obtained from the *Sanguinaria Canadensis*, or blood root of America, so called from the red colour of its juice; *Sanguis Draconis*, or *Dragon's Blood* (which see); and *Sanguisuga*, or Blood Sucker, a term sometimes applied to the Leech.

SANIES. A thin, serous, foetid matter, discharged from fistulæ, unhealthy sores, &c.

SANTONICA, or *Worm Seed*, consists of the small dried flowers and tops of some species of *Artemisia*; we obtain it from the Levant and from Barbary; it contains a volatile oil and a peculiar principle called *Santonine*, to both of which it probably owes its anthelmintic powers. Its chief use, as the common name implies, is as a vermifuge to remove the ascarides and lumbrici in children; a brisk purgative must be taken with, or immediately after it; for children, the dose is from 20 to 30 grains; for adults, from 1 to 2 drachms. It is sometimes made into an electuary with Honey or Treacle, and given night and morning.

SAPHENA (Greek *saphes*, manifest). The name of the most obvious vein of the leg.

SAPO. The Latin for *Soap* (which see). From this root we have the terms *S. durus*, *S. mollis*, hard and soft Soap, &c.

SAPONARIA, or *Soap Wort*. This is the *S. Officinalis*, of the natural order *Caryo-*



phyllaceæ; it is a native plant, and an old-

fashioned remedy for gout and skin diseases; it is thought to possess alterative, diaphoretic, and diuretic properties; it is very mucilaginous, and will make a lather like soap, instead of which it is sometimes used. The form of administration is a Decoction or Infusion, which may be taken *ad libitum*. The medical virtue of the plant appears to reside in the alkaloid *Saponin*.

SARSAPARILLA (Spanish *sarze*, red, *parelia*, a little vine). This is a name applied to the roots of several species of *Similax*, growing in the West Indies, Mexico, and South America; they all possess similar properties, but some of them in a more marked degree than others; those which are generally most esteemed in this country are the Brazilian, or Lisbon, and the Jamaica Sarsaparilla, the first of which is supposed to be the produce of the *Similax Syphilitica*, and the last, of the *S. Officinalis*.



This drug is generally supposed to be tonic and alterative in its properties; sometimes diuretic and diaphoretic; it is chiefly given in secondary syphilis, in various kinds of skin diseases, and in phthisical and serofulous disorders, and in cachectical and depraved conditions of the system, especially such as depend on old venereal disorders; the form of administration is usually that of the Compound Decoction, sometimes called the Lisbon Diet Drink; or the Liquid Extract, which contains a portion of spirit, and will keep almost any length of time;

the dose of this is from $\frac{1}{2}$ a drachm to 2 drachms in Water; of the decoction from 3 to 6 ounces; the Powder is sometimes given in $\frac{1}{2}$ drachm to 2 drachm doses, but it is generally stale and inert. The Simple decoction, which is perhaps as efficacious as any preparation of this drug, is made thus:—Digest 5 ounces of Sarsaparilla chips in 4 pints of Water; let it simmer gently for 2 hours; then take out the chips, bruise and replace them in the Water; boil down to 2 pints and strain. The Compound Decoction is made by adding to the above quantity while boiling, Sassafras (sliced), Guaiacum Wood (rasped), and Liquorice-root (bruised), of each 10 drachms, Meze-reon roots 3 drachms; boil for 15 minutes, and strain. These preparations can be made for domestic use, but it is perhaps best to purchase the Liquid Extract. The virtues of the Sarsaparilla appear to reside in a crystalline principle which has been called *Sarsaparillin* or *Similicine*; beside this principle the root contains a colouring substance, resin, a thick aromatic fixed oil, a waxy substance, chloride of potassium, and nitrate of potash, with starch, of which the proportion is large.

SARTORIUS (Latin *sartor*, a tailor). The name given to a muscle by means of which the legs are crossed like those of a tailor when he sits to work; it arises from the spinous process of the ilium, and is inserted into the inner tubercle of the head of the tibia. (See *Leg.*)

SARX (Greek for flesh). Hence the terms *Sarcocoele*, a fleshy enlargement of the testis, a kind of hernia; *Sarcocoma*, a fleshy tumour, &c.

SASSOLINE. A name given to native boracic acid, found on the edges of the hot springs near *Sasso*, in the territory of Florence.

SATURATION (Latin *satur*, full). This term is applied 1st, to a fluid which holds in solution as much of any substance as it can dissolve or “take up,” as it is called. Thus water will hold in solution about one-third of its weight of common salt; with this quantity it is said to be saturated. 2. When two principles, which have united to form a new body, are in such proportion that neither predominates, they are said to be saturated with each other; if they are not in this proportion the predominating principle is *sub* or under saturated, and the other *super*, or over saturated.

SASSAFRAS. The wood of the *Sassafras Officinale*, of the natural order *Lauraceæ*, is sometimes employed medicinally; it has a sweet aromatic taste, and an odour like

that of fennel, owing to the presence of a volatile oil, in which its virtues appear chiefly to reside, although it also contains fatty matter, resin, wax, tannic acid, gum, albumen, colouring matter, lignin, and salts, and a peculiar principle called *Sassafrin*.



The Sassafras has diaphoretic and stimulant properties; it is used as an ingredient in the Compound Decoction of Sarsaparilla. The Oil is sometimes given as a carminative in 1 or 2 drop doses.

SATELITE VEINS. The veins which accompany the bronchial artery as far as the bend of the cubit; they are scientifically termed *Venæ Comites*.

SATURNUS. The ancient designation of *Lead* (which see).

SATYRIASIS (Latin *satyrus*, a satyr). Lecherous madness; which sometimes occurs both in males and females; in the former it is the *Satyriasis furens* of Cullen; in the latter it is the *Nympho-mania furibunda* of Sauvages.

SAUSAGES. As an article of diet for healthy persons, there is nothing to be said against these, provided they are made of good meat, and have not been kept too long. If well seasoned, they sometimes tempt those who have but little appetite to eat, and are thus a positive benefit. It should be borne

in mind that the German Sausages, which are made of blood, liver; fat, &c., salted, spiced, and smoked, are apt to go into a peculiar state of decay, in which case they are decidedly poisonous. They should therefore be examined with great care before they are eaten.

SAVINE. The tops of the *Juniperus Sabina*, of the order *Coniferae*. A native shrub, having powerful cathartic, emmenagogue, and stimulant properties, acting especially on the uterus of the female. The dose of the Powder is from 5 to 10 grains. In large doses it acts as an irritant poison; it has been sometimes given to procure abortion, and with fatal results. The dose of the Oil is from 2 to 5 drops. Ointment and Cerate of Savine are used to keep open blisters, and promote a discharge of serum.

SCABIES, from *Scab*, a hard substance formed by a concretion of the fluid discharged from superficial ulcerations. The term *Scabies* is applied to a skin disease consisting of an eruption of small pimples, which occur chiefly between the fingers and at the flexures of the joints, terminating in scabs. Popularly this is called *Itch*, (which see).

SCALENUS (Greek *skalenos*. A geometrical figure with three unequal sides). Two muscles bear this name; they are distinguished as the *anticus* and the *posticus*, and assist in bending the head and the neck, arising from the transverse processes of the former, and being inserted into first and second ribs.

SCALL. An old English term derived from the Saxon *scala*, or *sceala*, and used much in the same sense as scale. This is the name of a skin disease, of which there are two varieties, Dry Scall and Humid Scall, the former being the *Sahalata* of the Arabians, the *Saphat* of the Hebrews; and the latter being also called as above by the Arabians; but *Netek* by the Hebrews. Bateman called the first *Psoriasis*, and the last *Impetigo*. See these two heads; also *Skin Disease*.

SCALP (perhaps from the Arabic *kaleph*, to peel, or bark; or the Latin *scalpo*, to scrape). The skin covering the head, which is thick and firm, and is connected with the cranium by a loose cellular tissue; it is the seat of various eruptions, such as *Ringworm*, *Eczema Capitis*, *Scalped Head*, *Dandriff*, *Impetigo* (which see); also encysted tumours, cuts and lacerated wounds which require careful treatment, as if inflammation is established it is very likely to affect the brain. When a Scalp wound occurs, sup-

posing the help of a surgeon cannot be obtained, it is best to wash the part carefully with cold water, and remove all dirt or other extraneous matter which may have got under the skin; then replace any flaps or strips which may have been torn up, if not quite detached, clipping the hair off as closely as possible all around the wound; then cover the edges with strips of plaister so as to keep them together, and lay over that a piece of lint soaked in cold water, and to keep the dressing in its place apply a cross bandage similar to one of those described at page 77 of vol. 1. The patient should be kept perfectly quiet, and on low diet; a little saline aperient will in most cases be necessary to cool the system, and subdue inflammatory symptoms. The dressings should be kept moistened with cold water for two or three days, applied so as not to disturb them. Sometimes in Scalp wounds there is much hæmorrhage; but this may generally be stopped after a little while by cold applications and pressure. If there is a single incision, and no great displacement of the skin, a stitch or two may be put through the edges to draw them together. One of the greatest dangers to be apprehended from a wound of the Scalp is erysipelas, which spreads very rapidly over the head, extends to the brain, and causes the death of the patient, unless its progress can be arrested. If a medical man has not been called to the case he should be at once, if there appears to be any danger of this. See *Erysipelas*.

Encysted Tumours, whose seat is the Scalp, are not very uncommon, they increase with age, and become more conspicuous on account of the falling away of the hair; if not painful, or very inconvenient, they need not be interfered with, as they are not dangerous; their removal is by no means difficult. See *Tumours*.

Eruptive diseases of the Scalp are commonly very obstinate and difficult to cure; keeping the hair cut short off, great cleanliness, and regular application of the prescribed remedies, are essential to success in the treatment of such: the head should be washed at least once a day with a strong lather of Yellow or Castile Soap. The Red Precipitate Ointment is often of essential service in these Scalp eruptions, but its application is useless over scabs; they should be removed previously by means of poultices. Alkaline lotions have been used with good effect: about 2 drachms of Subcarbonate of Soda dissolved in a pint and a-half of water, is perhaps the best form; a piece of lint saturated with it should be laid

over the head, and covered with oiled silk or thin gutta percha.

It often happens that an eruption of this kind is thrown out to relieve the system of morbid matter, and if in this case it is stopped too suddenly, convulsions and other ill consequences may follow; the patient should be put under a course of alterative medicine, and these, with strict attention to cleanliness, &c., will effect a cure as quickly as is safe and desirable.

When there is a full habit with a tendency to eruptions of the Scalp, the diet should be somewhat lowered. Mild and farinaceous food should be in a great measure substituted for flesh. But if the habit be weakly, the diet must be rendered more nourishing and stimulating; in all cases of the kind salted provisions should be avoided.

As a common medicine for children troubled with these eruptions, we may recommend Carbonate of Iron, from 3 to 6 grains, according to age, with $\frac{1}{2}$ a grain of Grey Powder, given twice a day for a week or so; then discontinue the latter ingredient, and keep on with the former alone for some weeks: then add the Grey Powder for a week, and intermit again. These are generally tedious cases, and the patient must not be out of heart if they are not conquered at once; nor if they break out again after a cure is effected.

SCALPEL (Latin *scalpo*, to scrape). By this term we now understand the common straight knife used in surgical operations; formerly it was chiefly employed as a respiratory, or instrument for scraping diseased bones.

SCAMMONY. The medicinal gum resin, so called, is the concrete gum of the *Convolvulus Scammonium*, a Syrian plant of the natural order *Convolvulaceæ*. It is a powerful drastic purgative, stronger than jalap, and less unpleasant to take; it is useful as a hydragogue in dropsies, and is given a vermifuge in combination with calomel, and in other cases which require an active purgative. In irritable states of the stomach, however, it is decidedly mischievous. It enters into the composition of several of the pharmaceutical preparations, and is a favourite ingredient with vendors of *Nostrums*, as may be seen by a reference to that head. The dose of the Powder for adults is from 5 to 10 grains; for children from 3 to 5 grains. It should always be combined with an aromatic, to prevent griping. The best Scammony is that from Aleppo, which contains twice as much of the active principle as that from Smyrna. The Compound Scammony

Powder of the London Pharmacopœia is a combination of this gum with Jalap and Ginger, $\frac{1}{2}$ an ounce of the latter to 2 ounces



of each of the former. This, or a preparation very like it, was formerly a popular medicine under the name of the Earl of Warwick's Powders. See *Aperients*, *Cathartics*, and *Drastic Purgatives*.

SCAPHA (Greek *skaphe*, a skiff). A term applied to the depression of the outer *Ear*, (which see.) Also to the nodose bandage, a double-headed roller, employed for stopping hæmorrhage; or for securing the compress after the performance of arteriotomy in the temple. *Scaphoidis* is the designation of a bone of the carpus, and also of the tarsus.

SCAPULA. The shoulder blade, the flat surface of which is sometimes called *venter*; it is traversed by the *dorsum scapulæ*, a ridge of bone which terminates in the acromion. This is a flat triangular bone situated in the front and side of the chest; it occupies the space from the second to the seventh rib, and is articulated, or joined, with the *Clavicle* and *Humerus* (which see). It is liable to *fracture*, for treatment of which see that head, and also *Shoulder*.

SCARF SKIN. This is the outermost layer of the skin, and is sometimes *Cuticle* or *Epidermis* (which see), also *Skin*.

SCARABÆUS (Latin for the beetle). The larvæ of a species of beetle which constitute the kind of animal worms called *Beetle Grains*. See *Worms*.

SCARIFICATION (Latin *scarifico*, to cut or scarify). The act of making small incisions, or punctures, for the purpose of obtaining blood, watery fluid, or air. (See *Cupping*). Under which head will be found a description, of the process, and a cut of the *Scarificator*, or instrument, by which it is effected. Scarification of the gums of children, is quite another operation, it is effected by means of a gum lancet, or any other fine sharp instrument, and is done, not as many suppose to afford a passage for the tooth, but to relieve the overloaded vessels and tissues of blood, and so lessen the tension and liability to inflammation. See *Gums*, *Infants*, *Teething*, &c.

SCARLATINA is but another name for Scarlet Fever, although, popularly, the former is considered a milder and less dangerous disease than the latter. Old medical writers termed this disease *Rosalia*, from the rosy appearance of the skin of those attacked by it; Morton called it *Morbilli confluentes*; Hoffman *Rubeola Rossalia*; and Heberden *Febris Rubra*. Bateman distinguishes three different species, which he calls:—*S. simplex*, the simple form; *S. anginosa*, with sore throat, and *S. maligna*, the malignant form; which last variety has been distinguished by some writers under the names *Angina gangrenosa*, and *Cynanche maligna*. With the nice distinctions of these several varieties of a very common disease, we need not trouble our readers; it will be sufficient for us to notice the general symptoms of Scarlet Fever, and the most efficacious mode of treatment.

So plainly is the former marked, that it is scarcely possible to mistake this eruptive fever for any other; almost invariably we have first sore throat, with shivering, head ache, and loss of appetite; probably there may be sickness, and vomiting, with heat of skin, quick pulse, and great thirst. In about 48 hours from the commencement of the attack, we have an eruption of red spots on the arms and chest, these gradually become more thickly planted, and widely spread, until they pervade the whole of the body, making the skin appear of one uniform scarlet tint, that is over the body generally; in the extremities it is more in patches, the skin being perceptibly rough to the touch. On the second day, generally, the tongue presents the appearance of being covered with a white film, through which the papillæ project as bright red spots, as we see

the seeds on a white strawberry; then the white creamy looking film comes away gradually, and leaves the tongue preternaturally clean and red. On the fourth or fifth day the eruption begins to fade, and by the seventh or eighth has entirely disappeared, and with it the febrile symptoms. Then commences the desquamation of the cuticle, which comes away in scales from the face and body, and in large flakes from the extremities. It is during this process that the greatest danger of contagion is to be apprehended, and, until it is completed, the patient should be kept apart from the rest of the family: it may be hastened by tepid bathing and rubbing. Sometimes, with Scarlet Fever, there is little real illness; the patient feels pretty well, and, in a few days, would like to leave the sick chamber; but it is always necessary to be cautious in gratifying such a wish, both for the sake of the invalid and of others; after an attack of this fever, as after measles, the system is peculiarly susceptible of morbid influences, and a chill taken at such a time may cause the most alarming results.

Sometimes we have a great aggravation of the symptoms above described; the throat gives the first warning of the attack; there is stiff neck, swelling of the glands, the lining of the mouth and fauces becomes at once of an intense crimson colour; there are ash coloured spots about the tonsils: the general eruption is of a deeper colour, and spreads more rapidly, than in the simple kind. This form of the disease is professionally termed *Scarlatina anginosa*. Then again we have the Malignant form, with the rash in irregular patches of a dusky hue which sometimes recedes and appears again. There is intense inflammation of the throat at the very outset with general enlargement of the salivary glands; the neck sometimes swells to a great size; there is a sloughy ulceration of the throat, from which, and the nostrils, through which it is difficult to breathe, there comes an acrid discharge, causing excoriation of the nose and lips, and sometimes extending to the larynx and trachea, as well as to the intestinal canal, causing croup, vomiting, and purging. The poisonous secretion enters into the circulation and vitiates the blood; sometimes the sense of hearing, as well as of smelling, is entirely destroyed by the acrid matter coming in contact with, and inflaming, the mucous membrane. With this form of the disease it is extremely difficult to deal, and the patient often sinks beneath it in spite of the best medical advice and assistance.

Treatment. At first mild aperients only should be given with diluted drinks and a spare diet; the patient should have plenty of fresh air; the head should be kept cool by means of ice in a bladder, the hair being cut close off or shaved: the following is a good febrifuge mixture:—Carbonate of Ammonia 1 drachm; Solution of Acetate of Ammonia 2 ounces; Water or Camphor Mixture 6 ounces: a tablespoonful to be taken every four hours; that is for an adult; a dessert-spoonful will be sufficient for a child. If the throat swells much externally and there are head aches, apply from two to four leeches; should the weakness be great, a Blister, or hot Bran Poultice must suffice. To gargle the throat, dissolve 1 drachm of Common Salt in half a pint of water; with children who cannot gargle, this may be injected against the fauces, or up the nostrils, by means of a syringe, or elastic gum bottle. When the inflammatory action has ceased and the skin is peeling off, it is necessary to take good stimulant and nutritious food, with tonics such as Iron and Quinine, unless they cause bad head symptoms; in which case these must be discontinued, and the diet chiefly depended on. With regard to the more Malignant form but little is to be done; the depressing effect of the contagious poison upon the whole body, and upon the nervous system especially, is so great as to defy all active treatment.

"If," says Dr. Watson, "we can save such patients at all, it must be by the liberal administration of Wine and Bark to sustain the flagging powers until the deadly agency of the poison in some measure passes away. When the patient is not killed by the first violence of the contagion, the system is reinoculated with the poisonous secretions from the throat; Wine and Bark must be diligently and watchfully given, the throat injected or gargled (as above directed), and the most vigilant care observed for some time should convalescence fortunately ensue."

As a preventive of Scarlet Fever, Belladonna has been much recommended; its effect is to deaden the nervous energy, and render the system less susceptible of the contagion. If a solution of the Extract be made in the proportion of 5 grains in 10 ounces of water, an adult may take 2 drachms, and a child from 20 to 30 drops twice a day. Recently Carbonate of Ammonia has been much recommended in the treatment of this disease. For adults 5 grain doses; for children half the quantity three times a day. Very frequently about ten or fourteen days after the subsidence of this fever, we have dropsical

swellings, with or without cough, and great lassitude, difficulty of breathing, great pain in the loins, and turbid urine. All this is often brought on by want of proper attention to the patient when convalescent; too early a resort to solid indigestible food will be likely to cause it, as well as exposure to cold and damp. For *treatment*, see *Dropsy*.

SCÉLOTYRBE (Greek *skelos*, the leg, and *tyrbe*, commotion). Literally, leg commotion. A contracted and palsied state of the limbs. This is an old term, and the affection to which it was applied closely resembled, if it was not identical, with our sea scurvy.

SCHÉELE'S GREEN. A green pigment, consisting of the arsenite of copper. Of late it has been much used in the manufacture of paper-hangings, and (as it is thought) has proved very prejudicial to health, which appears likely, as chemical analysis has detected the presence of arsenic in the fine dust collected in rooms hung with this bright green paper.

SCHEROMA (Greek *xeros*, dry). A dry inflammation of the eye.

SCHNEIDERIAN MEMBRANE. A name given to the pituitary membrane, which secretes the mucus of the nose, from Schneider, who first discovered and described it.

SCIALOGOGUES (Greek *sialos* saliva, and *ago*, to expel.)—Substances which increase the discharge of saliva. They are of two kinds, viz.: *Masticatories*, or pungent substances, which cause the increased flow of saliva by external application to the secretory vessels, such as tobacco, mezereum, &c., and those which produce the effect by internal exhibition through the medium of the circulation, as mercury. See *Salivation*.

SCIATICA (corrupted from the Greek, *ischion*, the hip.) An affection of the hip, which if it be not true neuralgia, is nearly allied to it. The seat of this very painful disease is principally the sciatic nerve, which is the largest of all the nerves, and passes out of the pelvis down the thigh to the ham, where it divides into branches, and descends to the lower part of the leg. This nerve sometimes becomes the seat of severe pain, it may be along its whole course, or only a portion of it; perhaps the hip or leg may be the part, and sometimes it is the foot and ankle only. This complaint is attended with so much suffering as frequently to impair the general health, and produce great emaciation. The pain may continue for a long while without interruption, or come on in paroxysms, the latter being more usually the case. In some instances the complaint is inflammatory, and then cupping

and leeching should be resorted to, with active aperients and other depletive measures. But when this is not the case, and the affection assumes more of a rheumatic or neuralgic character, dry cupping, with stimulating and anodyne liniments rubbed in along the course of the nerve: Extract of Aconite, 1 scruple, with Soap and Camphor Liniment, of each 1 ounce; or Soap Liniment and Turpentine, equal quantities, with about 1 drachm of Laudanum to 1 ounce of the mixture. Either of these combinations may be used with advantage. When the paroxysm is coming on, $\frac{1}{2}$ a grain of Morphine in solution should be taken, and in the intervals, Carbonate of Iron in $\frac{1}{2}$ drachm doses every four hours. Continue this for a few days, and then take Quinine, first in grain, then in 2 grain doses, keeping the bowels regular with Rhubarb and Blue Pill every night if required; or the latter alone about 2 grains, and an ounce of Decoction of Aloes in the morning.

Sometimes Sciatica proceeds from a disordered state of the kidneys, and in this case nothing is so efficacious as Spirits of Turpentine in about 20 minim doses, taken three times a day in Milk, or some other bland fluid. In all cases of Sciatica, perfect rest is very desirable, if not necessary, as the least exertion will frequently bring on a paroxysm; moderate warmth is also a desideratum. Dr. Graves says that persons afflicted with this complaint or lumbago, "ought always to wear stout drawers; the waistband should be broad, and consist of a strong, warm, and yet elastic material, so as to allow it to be worn tight without inconvenience."

SCILLA MARITIMA. The scientific name of the Sea Onion, or *Squill* (which see). Its active principle has been called *Scillitina*.

SCIRRHUS (Greek *skirros*, hard). Indurations, generally that which precedes the ulcerated state of *Cancer* (which see). *Scirrhomia* and *Scirrhus* are the other terms from this root which are sometimes used.

SCLERIASIS (Greek *skleros*, hard). Also means a hard tumour, or induration. (See *Tumour*.)

SCLEROTICA is the outermost or hardest membrane of the eye, hence we have the terms *sclerotic-ectomy*, the removal of a portion of the sclerotic and choroid coats, for the purpose of forming an artificial pupil; and *scleratitis*, inflammation of the *sclerotica*.

SCORIA (Greek *skor*, excrement). The scum, or dross of metals; the refuse or useless part of any substance.

SCOTOMA (Greek *skotos*, darkness, plural *scotomata*). Dark appearances before the

eyes, an affection attendant upon various organic diseases of the head. It is sometimes called Blind Head.

SCOTT'S ACID BATH. A bath employed by the late Dr. Scott as a remedy for jaundice. It consists of 3 ounces of diluted *Aqua Regia* to every gallon of water. The acid ingredient is thus prepared—Muriatic Acid 3 parts, and Nitric Acid 2 parts, by measure sufficient to make a pint; to this add water a pint.

SCREAMING. It is not uncommon for nervous and hysterical persons to manifest their uneasiness in this way; and with children it is very usual; nevertheless it should not be allowed to pass without inquiry as to the cause; if it is increased by any particular movement of the body something connected with the dress may be the excitement, or some internal injury. When it is intermittent, some painful affection of the chest or stomach may be suspected. If it occurs during sleep it may arise from the irritation of teething or of worms, or from presence of indigestible matter in the bowels, or from the impression of fear or terror made on the mind by some fearful scene or ghostly story. Incipient disease of the brain may also give rise to fits of screaming. Sometimes with children it is a mere habit which requires checking: such, too, is the case not unfrequently with weak and foolish women, who encourage the habit, instead of doing, as they ought, all they can to stop it. No remedies can be prescribed for screaming, as these must depend entirely on the causes, which are various.

SCROBICULUS CORDIS (Latin, diminutive of *scrobs*, a depression). The slight depression observable just below the ensiform cartilage, commonly called the Pit of the Stomach.

SCROFULA (Latin *scrofa*, a sow). Probably so called because swine are said to be subject to it. This is a disease characterised by a chronic swelling of the absorbent glands, which tend slowly to imperfect suppuration. It is sometimes called *struma*, and a person so affected is said to be *strumous*. The French call it *ecrouelles*, which in Scotland has been corrupted into "the cruels." Our popular name for it is the *King's Evil* (which see). In horses this affection is called *Farcy*. Scrofula is a diseased condition of the system, or rather the constitution; it is characterised by want of power, or tone. Its more prominent symptoms are the formation of indolent tumours in various parts of the body, but most commonly in the neck, behind the ears, and under the skin; after a while these suppurate,

and discharge a thick cheesy matter. A scrofulous person has generally a puffy unhealthy appearance about the face; the upper lip is thick and tumid, the belly prominent; there is frequent discharge from the eyes, nose, and mouth; a predisposition to catarrh and swelled tonsils, often causing a huskiness in the voice.

The digestive functions are imperfectly performed, consequently the bowels are irregular; the skin is seldom free from some kind of eruption, and there is listlessness and want of energy about the whole manner and appearance of the person so affected. Scrofula is among the commonest of hereditary taints, the children of scrofulous parents are seldom free from it, and we find such especially among the lower classes—pallid, puffy, dull and inanimate creatures, with a dry, harsh skin, grievously full of blemishes, and a mind almost a blank. Sometimes, though but rarely, and under favourable circumstances, we find a scrofulous child, whose want of bodily power and activity seems to be compensated by a remarkably quick and intelligent mind; but this is quite the exception to the rule; and, very often in such cases, it may be accounted for by the extra care and attention bestowed upon the development of the mental powers of those who are deficient in muscular energy.

Scrofula commonly first shows itself between the ages of 3 and 7; but not always in those early stages of life. Sometimes in those who have the taint, it may lie dormant until after the age of puberty, waiting, as it were, for some incitement to call it forth. A slight cold, unwholesome food, bad air, or a variety of other causes, may have this effect. Very few persons, however, really die of Scrofula; the ascertained proportion is about 8 in 100,000; but scrofulous persons often die of diseases which attack and overcome them, more readily and easily, on account of the vitiated and weakened condition of the system. Children who are brought up by hand, or even by a wet nurse, are more liable to Scrofula than those suckled by the mother; and especial care should be taken that all such are well fed and cared for, warmly clothed, well supplied with pure fresh air, and kept from all influences which might tend to develop the tendency of a scrofulous condition, which in all probability they have.

As to the proper *treatment* of this affection, we cannot recommend the once-popular remedy, the *touch* of a king. The more rational course is to give plenty of nutriment, adapted to age, but not to overfeed.

Give plenty of animal food, with a moderate proportion of vegetables and fruit: plenty of milk, a little beer, and wine. Assist the digestive powers, if necessary, with mild aperients, Rhubarb and Grey Powders: give tonics, Steel Wine and Quinine (alternately, week by week, with Cod Liver Oil) occasionally changing the above for some other tonic. Decoction of Sarsaparilla, with Iodide of Potassium, is likely to be serviceable: or Iodide of Iron, in the form of a syrup. There should also be sea-bathing once or twice a week; and if the glands of the neck are much swollen, they should be brushed over with Tincture of Iodine, or rubbed with Iodine Ointment.

Scrofulous Swellings of the *Knee* and *Hip-joint* (for *treatment*, see those heads). According to Mr. Phillips, this may be summed up in a sentence:—"Good food, good air, good clothing, good exercise."

SCROFULARIA NODOSA. The scientific name for the Knotty-rooted Figwort, which derives its first scientific name from being employed in scrofula; it is also used to make a fomentation for piles.



SCROTUM. The skin which envelopes the testes. It is sometimes employed in a more restricted sense; that is, to signify the longitudinal line which divides the testes into two equal parts. This part is liable to several diseases, such as *Cancer* (which see), and *Hernia* or *Rupture* of the Scrotum, which is called by those of the profession *Scrotocele*.

SCURF, commonly called *Dandriff*. This is an exfoliation of the cuticle of the skin,

which comes away in light flakes or scales; it is disagreeable but not at all dangerous, and only requires proper attention to keep it from being unsightly. It chiefly occurs in the head, but persons of delicate skins have it also on the face sometimes. The children of the poor, who have a prejudice against removing the scales, frequently have most filthy and disgusting heads in consequence. The loose exfoliations of the cuticle should always be removed, but with care and gentleness, so as not to wound the skin beneath. The scalp should be regularly washed with soap and water, and a simple ointment or pomatum applied; should it be obstinate, Red Precipitate Ointment may be rubbed lightly upon the scaly parts once a day, or the whole scalp may be washed with an alkaline lotion, made according to the recipe of Erasmus Wilson, of 2 ounces of Solution of Caustic Potash to a pint of Rain Water.

SCURVY (Latin *scorbutus*). A term probably derived from the Slavonic word *scorb*, with a Latin termination; it has been referred to the Danish *schorbert*, and *scorbeck*, signifying sore mouth—and the effect produced by Scurvy on the gums gives some show of probability to this derivation.

The characteristics of this disease are great debility, a pale complexion, with bloated skin, and livid spots about it here and there; soft, spongy gums, with offensive breath; swellings on the legs, and hæmorrhages from the mouth, nose, and bowels; the stools and urine are very foetid; and, as the disease proceeds, the livid spots on the skin enlarge and deepen in colour, until they resemble bruises, from the effusion of blood into the cellular tissues; the skin also becomes dry and rough, and of an uniform dusky hue: the debility increases, there is great difficulty of breathing, constipation of bowels, and disinclination to take any kind of nourishment, so that eventually, unless the disease yields to medical treatment, the patient dies of exhaustion.

Such is the inevitable course of a bad attack of Scurvy. Of course, lighter ones are constantly occurring, and severe ones in which the proper remedies are employed in time to arrest the progress of the disease, the origin of which is intimately associated with fatigue, cold, moisture, and impure air, and chiefly with a deprivation of vegetable food, and eating too exclusively salt provisions.

From this it must be evident that a liberal diet of fresh meat and succulent vegetables should be at once resorted to. Let the patient have plenty of open air exercise

and tepid bathing; drinking saline and chalybeate waters, especially those of Harrowgate, will be serviceable; and if vegetables cannot be procured, a portion of Lime or Lemon Juice should be taken daily. Mild aperient medicines will also be required, and, in many cases, tonics; preparations of Soda are the best, with bitter infusion. It has been ascertained that in this disease the blood is deficient in Potash, therefore this substance should be among the remedies administered—either the Bi-carbonate, Chlorate, or Tartrate will do; a drachm dissolved in a pint of water should be taken daily. Commonly Scurvy, if not very bad, can be cured by dietary measures alone. In the epidemic which prevailed in the prisons of Perth, in 1846, the addition of Milk, and, in some cases, Meat, to the usual allowance, arrested the disease. Malt liquor is good for those affected with Scurvy; of Lemon Juice, $\frac{1}{2}$ a pint should be given every day, pure, or diluted with water: this appears to be almost a specific, few cases resisting its influence.

SCUTIFORM (Latin *scuta*, a shield). Shaped like a shield. A term applied to the cartilage of the sternum or chest. See *Xiphoid*.

SCYBALUM (Greek *skybalon*, excrement). A term applied to the small indurated balls into which the fæces become converted after long retention in the colon.

SEA. This is a subject which naturally divides itself into three branches—Sea air, Sea bathing, and Sea sickness. Of the effects of the two first upon health we have several times had occasion to speak in our remarks upon the several diseases in which they are beneficial, and under such heads as *Air*, *Climate*, &c., (which see); also *Bathing*. One fact should be borne in mind by those who resort to the sea-side, for the sake of the purer and more bracing atmosphere which prevails there, viz., that invalids are likely to derive more benefit from the fresh sea breezes at the distance of about a quarter of a mile from the sea than close to it. The residence of such should be on a hill sloping down to the shore. On the same level as the sea, the air is often rendered somewhat impure by the decaying animal and vegetable matter which is left by each receding tide.

On the last of the three heads of this subject we shall speak fully when we come to treat of *Sickness*.

SEA TANG, or SEA WRACK. These are the common names of a kind of fuci, or seaweed, sometimes called the Yellow Bladder Wrack, or Sea Oak, Latin *Quercus Marina*, &c. Roasted and reduced to powder, it has

been given with good effect in scrofula, and other diseases of the lymphatic system. The plant contains soda and iodine, and was formerly a good deal used for cataplasms.

SEARCHING. Technically applied to the operation of introducing a metallic instrument, through the urethra into the bladder, for the purpose of ascertaining the presence of a *Calculus* (which see.)

SEBACEOUS (Latin *sebum*, suet). A term applied to glands or follicles which secrete an unctuous matter. They are situated in the skin, and are most numerous about the face and nose. Sometimes the orifices of these glands become black, and then they give to the face a very unsightly appearance; on squeezing the skin around them the fatty matter oozes out in the shape of a small worm with a black head, and this it is popularly thought to be; but although the matter itself is really not a creature, it has been ascertained to be the habitat of a minute parasitic worm, which, according to Mr. Erasmus Wilson, varies in size from 1-64th to 1-135th of an inch. Its shape is shown in the accompanying cut.



There are usually two, but often more, in the sebaceous contents of each follicle. They are said to exist in the most healthy skins, although they do not cause any irritation and annoyance, unless they become unduly numerous. The formation of matter which constitutes a common pimple is the result of inflammation proceeding from this cause. To prevent such a result as this, and the presentation of the unsightly "black heads," the face should be frequently washed in warm water, and well rubbed with a towel. Sometimes their appearance is attended with disorder of the stomach, which requires attention.

Sebacic Acid is an acid obtained from hog's lard, and *Sebat* is a neutral compound of this acid with a base.

SECALI CORNUTUM. The Latin name for *Ergot of Rye* (which see).

SECRECTIONS (Latin *secreo*, to separate). A product secreted or separated by a peculiar process from the blood. Under the term *Secretions* we generally include all secreted products whether they be *Excretions*, that is, matter separated by animal bodies, and rejected on account of their noxious qualities: as the carbonic acid from the lungs, the fæces from the intestines, the urine from the bladder, the perspiration from the skin,

&c.; or whether they be *Secretions* properly so called, which are matters separated and not rejected, but retained for the performance of certain subordinate actions in the living system such as the bile, the gastric juice, the saliva, &c.

SECUNDINES (Latin *secundus*, second). A technical term for the after-birth in child delivery, consisting of the placenta and its membranes. See *Labour*.

SEDATIVES (Latin *sedo*, to allay). Substances which occasion a temporary stimulus, which is followed by depression of the vital powers, and generally by torpor or sleep. Prussic acid is one of the most characteristic examples which can be cited of a true sedative. Opium and other substances are sometimes wrongly so called. See *Narcotics*.

SEGMOID (Greek *sigma*, or the letter x, and *idos* likeness). Resembling the letter x; applied to the flexure of the colon, where it forms a double curve in the iliac region; and to the semicircular valves which guard the orifice of the pulmonary artery, and of the aorta.

SEIDLITZ. The name of a Bohemian spa, whose waters owe their aperient quality to the presence of sulphate of magnesia, of which 100 grains are said to be contained in every pint of the water, which differs essentially from the cooling aperient drink taken in this country under the name of *Seidlitz Powders*. These consist generally of 2 drachms of Rochelle Salts, 2 scruples of Carbonate of Soda, dissolved first in about half a pint of water; then add $\frac{1}{2}$ a drachm of Tartaric Acid, and drink while effervescing. There is no saline aperient so pleasant to take as this.

SELENIUM (Greek *selene*, the moon). An elementary body extracted by Berzelius from the pyrites of Fahlun. According to Dr. Prout, it constitutes the link between sulphur and the metals: from it is obtained *Selenious Acid*, which contains 100 parts of Selenium and 40 of oxygen; *Selenic Acid* containing 60 parts of oxygen to 100 of Selenium; and *Selinuretted Hydrogen*, a foetid gas containing 2.5 of hydrogen to 100 parts of Selenium. The medical properties of this substance do not appear to have been yet tested.

SELLA EQUINA—*Sphenoidis* and *Turcica* (Latin *sella*, a seat). These are all designations of the *sphenoid* bone, resembling a Turkish saddle.

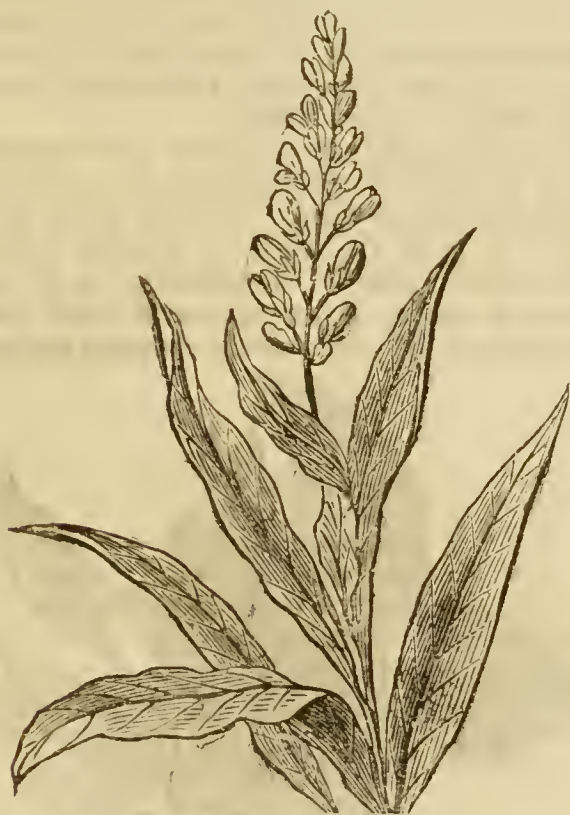
SELTZER WATER. This is a purgative mineral water which owes its active properties to the presence of 4 grains of Subcarbonate of Soda, 2 of Subcarbonate of

Magnesia, and 20 of Muriate of Soda, in 20 ounces of water impregnated with Carbonic Acid Gas. It is useful in some forms of dyspepsia and gravel: to those in good health but little good can result from the habitual use of it.

SEMEN (Latin *sevo*, to sow). This is a name applied not only to vegetable seeds but also to the peculiar vivifying fluid secreted in the testes.

SEMEIOLOGY (Greek *semeion*, a sign). That branch of medical science which treats of the signs of diseases.

SENEGA (so called from its use by the Senegaroo Indians as a remedy for the bite of the rattlesnake.) This is a plant of the



natural order *Polygalaceae*, it is commonly called *Snakeroot*.

SENEGINE is the active principle of the *Senega*, and other species of the genus *Polygala*.

SEMI (Latin for *semis*, half). A prefix of several surgical terms, such as *Semi-circular Canals*, three canals of the internal ear, situated in the substance of the petrous portion of the temporal bone, and opening into the vestibule (see *Ear*); *Semi-Cupium*, a half bath, or one that reaches only to the hips; it is called by the French *demibain* (see *Baths*); *Semi-lunar Ganglia*, two ganglia situated on each side of the aorta, on a level with the cœliac artery; *Semi-lunar Notch*, an indentation in the form of a half moon, between the coracoid process and the upper border of the *Scapula* (which see);

Semi-lunar Valves, three semi-circular valves which guard the orifice of the pulmonary artery; *Semi-membranosus*, a muscle arising from the tuber ischia, and inserted into the tibia; it is the *Semi-nervosus* of Wilson, and bends the thigh (which see).

SEMOLA AND SEMOLINA. These are farinaceous preparations, both containing a large proportion of gluten, and therefore highly nutritious; the former of the two is the invention of the eminent chemist Mr. Bullock; it consists chiefly of the gluten of wheat freed from the starchy constituents of the grain; in its nourishing powers it approaches very near to animal food. *Semolina* is prepared from a Russian grain; a very similar substance, but lately been sold under the name of *Manna Croup*.

SENNA. A name commonly applied to the dried leaflets of several species of *Cassia* of the natural order *Leguminosae*, which are found chiefly in Africa and India. But that which is considered as the true officinal Senna is the produce of the *Cassia Lanceolata* and *C. Obovata*.

This is commonly called *Alexandrine Senna*, from the port at which it is shipped, but it is collected far in the interior of Upper Egypt beyond Sienne; it is commonly adulterated with the leaves of two or three other plants, which may be distinguished from it by their greater length and thickness, the absence of visible lateral nerves on the under side, and their lighter colour; some of them by their downy surface, their unbranched lateral nerves running nearly in parallel lines, and by their being usually folded lengthways; this adulteration, which is always found more or less in the kind of Senna here spoken of, is technically called *Argel*. The Tripoli Senna, which is the produce of the *C. Ethiopica*, is said to be collected chiefly at Fezzan; it is smaller and more broken than the other kinds, the leaflets being more thin and fragile; they are naturally, too, of a more blunt rounded form, and as generally imported are much mixed with stalks and pieces of fibre. Indian Senna is the produce of *C. Elongata*; it comes mostly from Arabia, but is shipped at East Indian ports; it is distinguished from the other kinds by its long narrow leaflets; it is considered the best kind.

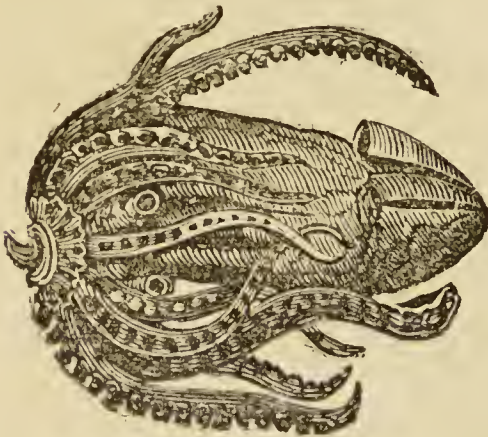
The purgative properties of Senna are well known, and it is the most commonly employed of all cathartics; it is sure in its operation, but rather heating, and apt to gripe and cause nausea; therefore an aromatic should generally be given with it. It should not be administered when there is

irritation and fever ; nor during pregnancy, nor the existence of piles. It may be given to children and elderly persons quite safely, when a tolerably active purge is required, and it is well to combine a saline aperient with it, as in *Black Draught* (which see). The powdered Leaves are sometimes, but not often, administered ; the dose varies from $\frac{1}{2}$ a drachm to 2 drachms ; the Confection, a mild laxative, commonly called Lenative Electuary, from 1 to 4 drachms ; the Syrup, a good preparation for young children, from 1 to 2 drachms ; Tincture, from 1 to 4 drachms ; Compound Infusion, an excellent family medicine, from 1 to 3 ounces. It may be prepared as follows :—Senna Leaves, 4 drachms ; Raisins (stoned), 1 ounce ; Ginger (bruised), 2 drachms ; Boiling Water, a pint ; macerate four hours in a covered vessel, and strain. A table spoonful of brandy will add to its stomachic properties, and make it keep better ; but, if for young children, this had better not be added. The Infusion should be kept in a cool place.

SENSES. These are the faculties by which we become acquainted with the condition of our bodies, and with certain properties and states of external things, such as their colour, taste, odour, size, form, density, &c. The senses are five in number, viz. *sight, hearing, taste, smell, and touch* (all of which see). They have been well called the “five gateways of knowledge.” Their messengers, which convey all impressions to the brain, are the *Nerves* (which see) ; to this head we may also refer for *Sensation* and *Sensibility*.

SEPTIC (Greek *septo*, to putrify). Relating to *Putrefaction* (which see). *Antiseptics* are substances which retard putrefaction.

SEPIA OFFICINALIS. The scientific name



of the cuttle fish, the bone of which is used as a dentifrice.

SEPTUM (Latin *sepes*, a hedge). Literally an enclosure, or fenced place ; hence the term *Septum Cordis*, the fleshy substance which separates the right from the left ven-

tricle of the heart ; this is sometimes called *S. auriculorum*. The partition separating the anterior Cornua of the brain is termed *S. lucidum* ; and the cartilaginous partition of the nostrils *S. narium*.

SEQUESTRUM (Latin *sequestro*, to sever). The portion of bone which becomes detached in necrosis.

SEQUELA (Latin *sequor*, to follow). Morbid affections which follow certain diseases, and appear to be a natural consequence of them ; as the form of dropsy termed anasarca, after scarlatina, &c.

SERIASIS. (Greek *seros*, a cavity.) An affliction described by Paulus as an inflammation about the cerebrum, in which the brain is said sometimes to mortify in three days ; it is so called, because the bones about the fontanelle, or sometimes the membrane only, are depressed or drawn in, leaving a cavity. (See *Brain*.)

SERPENTARIA. A plant of the natural order *Aristolochiaceæ*, called in America, Virginian Snake Root. The root is the part used ; it is in the form of slender fibres, with knotted heads. *Serpentary*, as it was formerly called, is an aromatic tonic and diaphoretic, in large doses causing nausea



and relaxation of the bowels. It was at one time much given in agues and other intermittents, usually in combination with bark ;

It is still sometimes administered, with stimulants and diaphoretics, in typhoid and other fevers of an exhaustive character. The dose of the Powder is from 10 to 30 grains; of the Infusion, from 1 to 2 ounces; of the Tincture, from 1 to 3 drachms.

SERPIGO (Latin *serpo*, to creep.) A name sometimes given to ringworm or tetter, from its creeping over the surface of the skin. See *Herpes*.

SERRATUS (Latin *serra*, a saw). A name given to three muscles on account of their gagged, or saw-like form; they are *S. magnus*, *S. posticus superior*, and *S. p. inferior*; the first of which brings the scapula forward, and is a muscle of inspiration; the second raises the ribs, and thus dilates the thorax; and the last depresses the lower ribs, and draws them backwards.

SERRE-NÆUD. An instrument, consisting of a long narrow round piece of silver, terminating at the end with a little round hole, like the eye of a needle, and at the other in a kind of groove or notch; it was formerly much used in applying ligatures, but is now nearly superseded by a more convenient contrivance.

SERUM. The thin transparent part of the blood which may be obtained after the crassamentum has separated by coagulation; it is of a pale straw colour, with a greenish cast, and a slight saline taste. (See *Blood*.) The above term is also applied to the thin parts of milk (see *Whey*); and to the lymph-like fluid secreted by certain membranes of the body, such as the pericardium, peritoneum, pleuritis, which are denominated serous membranes.

SESAMOID (Greek *sesame*, an Indian bean). The designation of small bones resembling a bean in shape, found at the roots of the first joint of the thumb and the great toe.

SESQUI (contracted from the Latin *semisquæ*, and a half). A prefix denoting the quantity and a half more. Hence the term sometimes used in prescriptions, *sesquuncie* for *sesqui uncia*, an ounce and a half; *sesquihora*, an hour and a half, &c.

SETA (Latin for a bristle). Hence the name given to the Horse-hair worm, or Gordius, *Seta equina*. The Laplanders are subject to a disease which they call *ullen*, or *hotine*, and which they attribute to the presence of this worm in the stagnant water of their marshes and ditches.

SETON (from the above root), is a kind of issue commonly made with a flat needle, threaded with silk, or a thin strip of gutta-percha; formerly horse-hair was employed, hence the above name. To form a Seton it

is only necessary to pinch up a fold of the skin with the finger and thumb, and then to pass through the base of the fold the flat Seton-needle, armed with silk or other suitable material, which must be left in the opening with an end hanging out on each side. A few days after this operation has been performed there will probably be a discharge of thick matter, which will have to be kept up for some time. This matter must not be suffered to remain long on the part, or it will become very offensive and irritating; it should be carefully washed off two or three times a day, and a dressing of simple cerate applied. At each dressing the silk in the Seton should be gently moved from side to side, to keep up the inflammatory action, and consequent discharge, from which it is hoped the desired relief may be obtained. A Seton is most commonly applied in the neck, to relieve alarming head symptoms. It requires to be kept open for a considerable length of time; if it shows a disposition to heal before the end is attained, a little Savine Ointment, or Blister Salve should be smeared over the silk and drawn into the cuts. See *Issue*.

SEX. As any physiologist might expect, this element exercises a marked effect upon individual health. Thus we find in the male, where there is greater tone and power, and increased activity by his occupation and habits, there is a particular liability to inflammatory diseases. In the female, where there is greater delicacy of frame and laxity of fibre, there is a greater tendency to those of a nervous character. In connection with childbirth, it is an ascertained fact that a pregnancy in which the child is a male is likely to be more prolonged than if of the opposite Sex. With regard to the relative number of the sexes born, we find that the average of Europe gives 106 boys to 100 girls, and, according to Quetelet, with married couples, the more the father's age exceeds the mother's, the greater will be the number of male children born. As a general rule, females require smaller doses of medicine than males.

SHAMPOOING. A name given in the East to an operation which consists in pressing the joints and rubbing the limbs, so as to mitigate pain, and restore vigour and tone to the parts. It is an accompaniment of the hot bath, and is thought to be useful in rheumatic affections, sprains, &c.

SHELL FISH. These are generally indigestible, and some, like the mussel, are even poisonous at times. See *Fish*, *Poisons*.

SHERRY. This is a dry, strong wine, which takes its name from Xeres in Spain,

whence much of it comes. When pure, as imported, it contains rather more than 19 per cent. of alcohol. It has not the astringency of Port wine, and generally agrees better with invalids. If good, it is nearly, or quite free from acid.

SHINGLES. (Probably a corruption of the Latin term *cingulum*, a girdle.) This is a popular name for a disease of the skin, which is a variety of *Herpes*. The eruption, which consists of vesicles in distinct clusters, upon inflamed bases, that extend a little beyond the margin of each cluster, is generally preceded by such constitutional symptoms as loss of appetite, head ache, cold chills, sickness, and accelerated pulse. Sometimes there is heat and pricking in the skin, and a sensation as though hot needles were thrust into it; or there may be a deep seated pain in the chest. At times, however, the patient has no warning of this kind, and he is first made aware of the affection by the appearance of red patches, with small elevations, clustered together; these gradually enlarge, and become clear and glassy, being filled with a colourless lymph, which first turns milky, and then concretes into scabs. As the crusts fall off, and the eruption disappears at one part, it frequently shows itself in the immediate vicinity, and so gradually creeps all over the skin; sometimes there is a free discharge and ulceration. In some cases the clusters of eruption begin at the loins, and extend downwards to the thighs and legs; very commonly they form a sort of band round the waist, and hence, probably, the name given to the disease. From the 12th to the 14th day is the time at which the scabs, if a cluster, may be expected to fall off, leaving the skin beneath red and tender, with little indented rings, where the vesicles have been. Generally the disease runs its course in about three weeks; it is not contagious, and may attack the same person more than once. Young persons between 12 and 25 years of age, appear to be most subject to this disease, which, however, sometimes attacks aged people. Summer and autumn are the seasons when it most prevails; the cause of it is not very clear; probably it may arise from sudden changes of temperature, and chills taken when in a heated state. For *treatment* we should recommend aperients to keep the body gently open, with a light and nutritious diet; effervescing draughts, made with Bicarbonate of Potash, instead of Soda; if, as is sometimes the case, there is much pain, take Dover's Powder at bedtime, from 5 to 10 grains, according to age; bathe the eruptions with Goulard Water,

and dress them, when discharging, with Zinc Ointment, spread upon lint; old persons will require tonics and change of air, but the young generally get over it without this; although, for all, a little strengthening medicine is desirable.

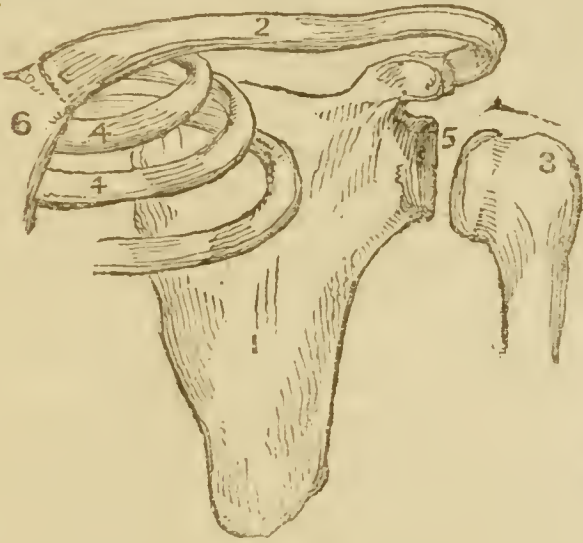
SHIVERING. This is probably a nervous sensation; it is symptomatic of cold and the approach of fever, and sometimes of the formation of matter or pus within the tissues of the body, which is a consequence of inflammatory disease. When Shivering amounts to actual chattering of the teeth and shaking of the limbs, it is termed *Rigor*, (which see).

SHOCK. This, in medical language, signifies the depressing effect upon the nervous system and the constitution generally, of severe bodily pain or injury. Its effects may be either temporary or lasting, and it will be severe, not so much in proportion to the severity of the cause, as to the sensitiveness of the part or organ through which it is received. Thus, a comparatively slight blow on any part where there is a considerable collection of nerves closely interlaced, as about the heart, at the pit of the stomach, or in the neck, will be followed by an immediate Shock, which sometimes proves fatal. Great, too, is the depression of system which follows a blow on the head, and injuries where there is extensive laceration and hæmorrhage; and surgical operations, of which this was one of the principal hazards before the introduction of the use of chloroform and other anæsthetics to produce insensibility.

A person who has suffered a Shock should be treated precisely as though he had fainted, or become insensible from concussion of the brain. Stimulants by the mouth, as soon as they can be swallowed, should be administered, but cautiously—for it should be remembered that after depression we have reaction; and inflammatory action may run more high after a Shock than before it. During the first stage of a Shock, all injudicious movements and interference should be prevented. Let the patient remain quiescent for a time, or the very means taken for restoration may prove fatal to hopes of recovery. See *Fainting*.

SHOULDER. This part of the human frame is composed of three bones, as shown in the accompanying cut; the shoulder-blade or scapula (1); the collar-bone or clavicle (2); and the arm-bone or humerus (3); to explain more clearly the anatomy of the part, we give the upper ribs (4, 4); the cup of the scapula is marked by 5; into this the rounded head of the humerus fits in

such a way as to allow of a free movement at the lower joint of the arm, which owing to the shallowness of the cup is very liable to *Dislocation*, (which see). By means of the collar-bone which springs from the chest-bone (6) at one end, and is attached at the other to the projection of the shoulder-



blade, the Shoulders are extended, or as it is generally called "squared," and this gives that wide appearance to the upper part of the chest which is in fact the narrowest part, the whole shape of it being conical. Owing to the thinness of the clavicle it is one of the bones most liable to *Fracture*, (which see.) A glance at the diagram will show how admirably adapted is the whole structure of this part to effect the various movements of the arm and hand. There is nothing peculiar in the diseases or injuries to which the part is liable to call for special attention, other than what they have recorded under the heads above referred to.

SIBBENS. A name for *Frambæsia*, or *Yaws* (which see.)

SIDE. Pain in the Side is a common symptom of several affections; when it occurs high up, it may be occasioned by inflammation of the lungs, in which case there will be also febrile symptoms, but it is not so generally, if it proceeds from muscular rheumatism; if aggravated by external pressure, we may usually assign it to this cause. Pain in the right Side of the chest and lower down, may be owing to some affection of the liver, on the left Side to affection of the spleen; on either Side, or in any position, it may be merely sympathetic, and in females is often so, of some functional or other disorder of the womb. Continued pain in the Side should always meet with proper attention; it may frequently be relieved by a little aperient

medicine, and stimulant and anodyne liniments rubbed into the part affected, or mustard or bran poultices applied thereto.

SIDERATIO (Latin *sidus*, a star.) A name given to erysipelas of the head and face, under the impression that it was produced by the influence of the planets.

SIDERUM. Bergmann gave this name to phosphate of *Iron* (which see).

SIGHT. Of the organ of this most important sense, we have spoken somewhat fully under its proper head (*see Eye*). Of the nature of the medium by which it acts, an account will be found under the head *Light*. On the several diseased states and conditions, which interfere with the proper action of this organ, remarks have been made under the first of the above heads, also under that of *Ophthalmia*, &c. : for the means taken to remedy natural defects of Sight see (*Spectacles*.) It is only necessary for us here briefly to remark of this faculty of seeing, that like the other senses, it conveys no clear information to the mind, until it has been well exercised and tested by comparison: thus the person born blind, to whom the faculty is for the first time given, recognizes not the objects he looks upon, although touch, taste, or smell may have previously made them known to him.

The image now first painted on his retina may convey a different impression to his mind, from that which an examination of the same object by another sense than Sight had conveyed, and he can only arrive at a true conception by studying and comparing. The blind man in Scripture, to whom Our Saviour gave Sight, saw men as trees walking; he had known there were men before, and he had known that there were trees; could tell when he came in contact with one or the other, but he could not tell what they were like; now he had a new power of *testing* his former experience, and correcting his feeble impressions. The infant, when it first opens its eyes to the light, looks upon a world of wonders, and can form no correct idea of any object which it sees; until it has also touched and handled, tasted, or smelled it. The moral of all this is, that Sight, like every other faculty, requires careful education, and the pitch of perfection to which it can be educated, is truly surprising. Very seldom is it sufficiently and properly exercised. Most men walk about this beautiful and wonderful world, as if they had a veil before their eyes; vision is to them but a half faculty, a dull, almost inert sense; but such should remember, that he is best able to serve him-

self and his fellow creatures, and to appreciate the power and goodness of God, who improves and exercises to its fullest extent, every power and faculty which God has given to him.

SILICA. Siliceous earth, being the oxide of silicium, constituting the whole of silex, or flint. It is dissolved by solution of the fixed alkalies, and combines with many of the metallic oxides; hence it is sometimes called silicic acid; the compound with alkaline bases, *Fluo-silicic Acid gas*, is formed when hydrofluoric acid comes in contact with siliceous earth. The solution is formed by saturating water with this gas; it emits fumes on exposure to the air, and is commonly called *Saturated Fluoric Acid*.

SILK. Dresses woven of this material are at once light and warm, and many persons who from natural irritability cannot wear woollen fabrics next the skin, will find this a good substitute. *Oiled Silk* is useful to put over poultices and other moist applications, to prevent speedy evaporation.

SILPHUM. A name sometimes given to *Assafoetida*, (which see).

SILVER (Latin *Argentum* (which see) also *Quicksilver* and *Mercury*.

SILVIC ACID. An acid produced from the resin of the Scotch fir. See *Abies*.

SIMARUBA. The Mountain or Bitter Damson, or Slave Wood of Jamaica, and



other West India islands, yields what is commonly called the Simaruba bark, which possesses much the same properties as quassia, with which it has a close botanical

as well as medical affinity. Like most other bitters it causes vomiting and purging when given in large doses; it is useful in all cases where a simple tonic is required; it is not given in substance, but in the form of an infusion, the dose of which is from 1 to 2 ounces. This drug is much used in Germany in the latter stages of dysentery and diarrhoea.

SIMPLES. The general name of all herbs which are possessed of any real or reputed medicinal virtues.

SINAPIS. The name of a genus of plants of the order *Cruciferae*, in which are the *S. Alba*, and *S. Nigra*, the white and common *Mustard* (which see). From this root we have the term *sinapism*, a mustard plaster or poultice.

SINCIPIUT. The fore part of the head; the back part is called the *occiput*.

SINEW. (This word comes from the Saxon *sinu* or *sinwe*, and its primary meaning is stretched or strained.) In anatomy it signifies a tendon, or that part of a muscle by which it is united to a bone. See *Muscle*.

SINGING, like reading aloud, is a vocal exercise, which is beneficial to those who have sound lungs and good muscular strength, although with such it may be mischievous, if practised too long or too frequently: professional singers, we find, as a rule, are very liable to bronchial and chest affections, but this may be partly owing to the great alternations of temperature to which they are necessarily exposed. Those who are narrow chested and predisposed to pulmonary complaints, should avoid singing, except as an occasional exercise of a most pleasing accomplishment.

SINGULTUS. The meaning of this term is properly sobbing, it is commonly applied to *Hiccup* (which see).

SINKING. We often hear persons complain of a "Sinking" sensation at the pit of the stomach: this generally arises from a disordered state of the digestive organs; the effect is a purely nervous one, and a nervous stimulant will be likely to relieve it for a time; but there will quickly be a return of the sensation, and then the remedy must be resorted to again, with the probability of establishing a dangerous habit. Better is it therefore to try aperient medicine; something like this will probably afford quick and permanent relief. Rhubarb and Carbonate of Soda of each a drachm; Peppermint or Cinnamon Water, 6 ounces; two tablespoonfuls every four hours until the bowels are freely moved.

SINUS (Latin for gulph). It is used to denote 1st, a cavity or cell within the sub-

stance of a bone, as of the forehead, &c. 2nd, a large vein, like those of the brain, &c. 3rd, the numerous small foramina which open on the surface of the mucous lining of the urethra, and which are called the *sinuses of Morgagni*, &c.

SIXTH SENSE. A term which has been applied to *muscular* sensations, arising from the sensitive department of the fifth pair and compound spinal nerves. The *seventh*, or *visceral sense*, is a term applied to the *instinctive* sensations arising from the ganglionic department of the nervous system.

SIZE. A term sometimes applied to the buffy coat which appears on the surface of coagulated blood drawn during inflammation. The surface of the coagulum is frequently contracted, puckered up at the edges and concave in the centre, in such cases the blood is said to be cupped. See *Blood, Inflammation*.

SKELETON (Greek *skello*, to dry up). The dry bony frame of an animal; the osseous structure, as it would be more scientifically termed. Here, of course, we have only to do with the human Skeleton, of which it will be necessary to give a brief description; it is formed by a complete assemblage of conjoined bones, the exact number of which is somewhat variable, some few not being always present, and some minor ones, such as those of the ear, being often omitted in reckoning; 252 may be stated as about the number of distinct parts which go to make up this complex and wondrous structure. When these bones are united by the natural ligaments, it is called a natural Skeleton; when by wires, as is the case when prepared and preserved for scientific purposes, it is termed an artificial Skeleton, which term, however, conveys a false idea.

Of the mental superiority of man over all other living creatures, no rational person entertains a doubt; but with regard to his physical conformation, some have questioned his right to the proud position, which all true comparative anatomists agree in assigning him, and not without good reason. For the sake of comparison, we accompany our cut of the human Skeleton with that of the most highly organized of the brute animals, the head of the monkey tribe. A mere cursory glance at these two figures convinces us of the superior beauty, and higher development of the structure of man as compared with that of the orang-outan, and a little examination will convince us, that our first impression is a correct one. In following out the comparison, step by step, we shall at the same time be enabled to give our readers a clear notion of the

peculiarities of the human structure, and exhibit the striking difference between it and that of the baboon. For a closer study of any particular part, we must refer our readers to the subject heading under which it may be found.

The first thing that strikes the observer is the manifest want of adaptability in the Skeleton of the baboon to maintain the erect position; whilst the placing of man on his hands and feet is felt to be opposed to his structure. If we examine the two Skeletons from this point of view, we shall observe a number of remarkable structural differences. In the first place, it will be seen that the feet of man are broader than those of the monkey, and of any other animal in proportion to its size, in order to give a surface large enough for the body to be conveniently placed on them, and moved with rapidity. On examining the bones of the tarsus (instep) (figs. 1 and 2 *n*), it will be seen that they are bound firmly together, and that they are on a level with the bones of the toes. This is not the case with the orang, in which the bones of the tarsus are loose, and considerably elevated above those of the toes. In dogs, and many other quadrupeds, the bones of the instep and wrist are considerably elevated from the ground, and the body rests entirely on the toes. In the horse, and other animals with a solid hoof, not only are the bones which represent the wrist and instep in man elevated, but only the third series of bones constituting the toes (fig. 1, *o*) rest on the ground. The whole structure of the foot of man is adapted to sustaining the weight of the body, and is not used for the purposes of prehension, as is the case in all the quadrumana. In this we have an instance of higher development, as the function of handling, which is possessed by both the fore and hind extremities of the monkeys, is entirely confined to the upper in man; whilst the function of supporting the body, which must necessarily interfere with the delicate sensation required for expert manipulation is performed by all the extremities of the monkeys, it is confined to the lower extremities in man. It is this fact that at once constitutes man "bi-manus," (two-handed), and "biped," (two-footed); a combination not found in any other animal.

If we now cast our eyes above the foot, we shall see how differently the parts of the leg are placed in relation to it in man and the monkey. In the former the tibia and fibula (fig. 1, *m*) are placed at right angles with the foot, and the heel-bone projects so

as to receive the tendon of the powerful muscle which constitutes the calf of the leg, and performs the most service in the locomotion of the body. Above the bones of the leg are those of the thigh (figs. 1 and 2, *l*). On these bones the broad pelvis

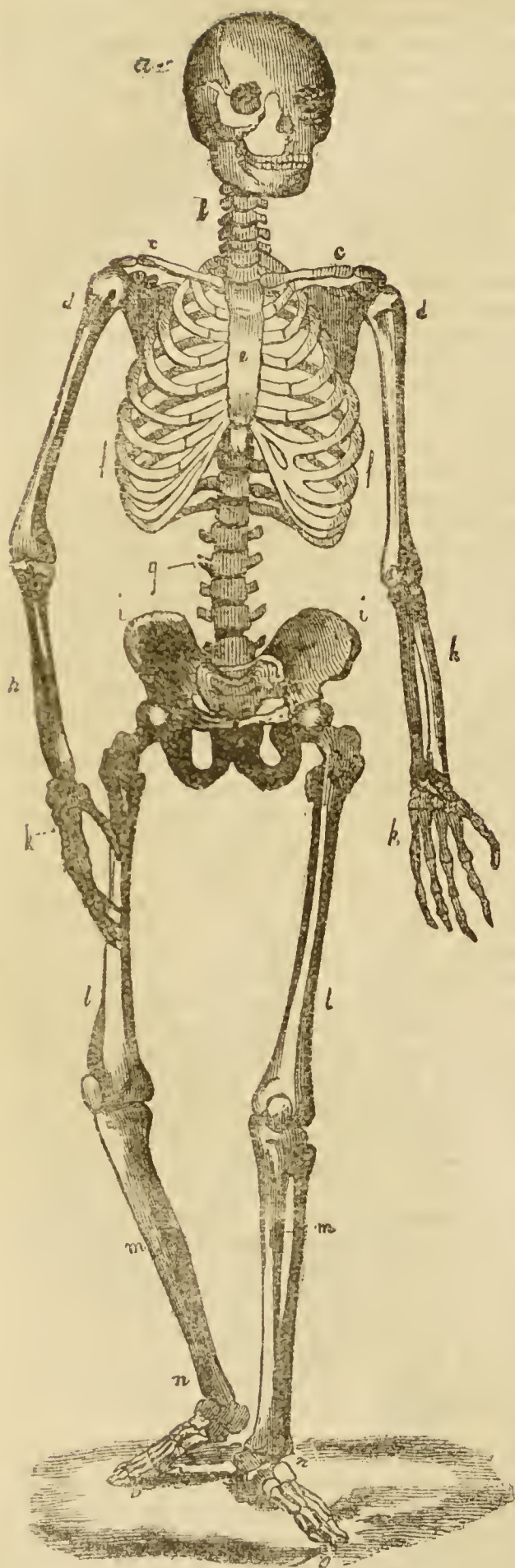


Fig. 1.

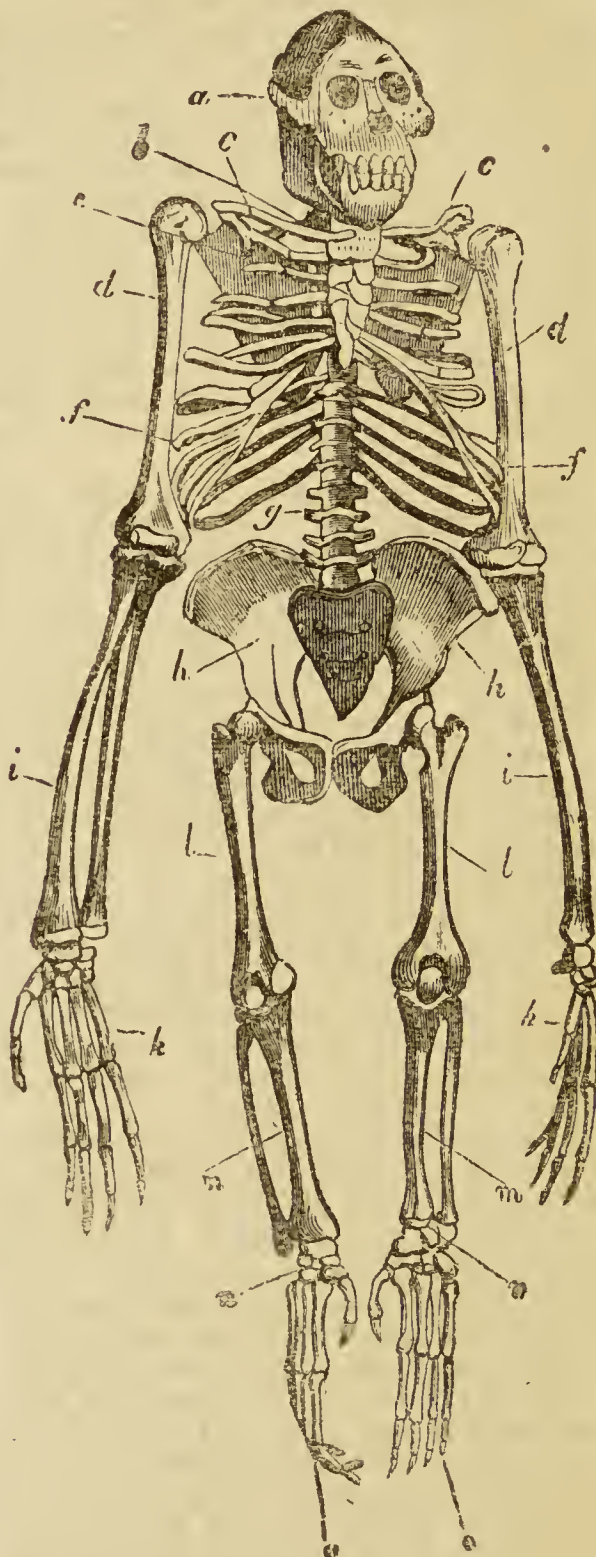


Fig. 2.

of the man (fig. 1, *i*) rests, and by the peculiar shape of the neck of the thigh-bone, a broad surface of support is secured. In man the bones of the thigh are much longer than in the oran, and wider apart

in proportion to their length at the summits. The pelvis (fig. 1, *i*) in man differs remarkably from that of the lower animals; it is much broader and firmer at the back, in that portion on which the bones of the spine (figs. 1 and 2, *g*) rest. The bones of the pelvis are also much curved below, for the support of the internal viscera, and also to render the sitting posture of man tolerable, which would be impossible were this part of his Skeleton constructed on the same principle as that of the oran-outan.

From the pelvis we pass to the spine, that part of the Skeleton included between the head and the pelvis, and which is composed of a number of small bones called *vertebræ* (from *vertere*, to turn). These are divided into three kinds—the lumbar (figs. 1 and 2, *g*); the dorsal; and the cervical (*b b*). The *vertebræ* in man are so constructed as to fit the spine for the erect attitude. They are arranged in the form of a pyramid, with the base below, and admit of a considerable amount of motion, but always so arranged that the centre of gravity is brought within the base. To the *vertebræ* the ribs (*f f*) are attached, and brought together in front by a broad bone called the sternum (*e e*). The thorax or chest is thus formed, and in man it differs from the monkey by being shallower and more compressed in front, and wider from side to side; by this means the tendency of the trunk to press forwards, as it were, which is seen in the lower animals, is prevented.

We now turn to the upper extremities. They are attached by means of the blade-bone and collar-bone (*c c*) to the thorax. They differ not less in the two beings we are comparing than the lower extremities. In the oran the bones of the arm are much longer than those of the leg; in man they are of the same length. In the hand (*k k*), also, we observe great differences. The first thing that strikes us is the size of the thumb. In monkeys we have what is called an "opposable thumb"—a finger opposed to the others, by which grasping and handling are affected; but in man this thumb is capable of touching the points of all the fingers, whilst in the oran-outan the thumb is so small, and the fingers so long, that their tips can hardly be strained to meet—much less opposed to each other for use. It is the meeting of the thumb and tips of the fingers which enables man to use his hand at once, with so much precision and power, that, of all organs that distinguish him, this has been pointed out as the most important. Even were the structure of the hand more elevated in apes, it would be of

less use to them than it is to man; for it would only be when they were in the erect attitude that they could use it. But man's hand is always free, for his attitude is erect.

In all our reflections, however, on the superiority of the organs of man over those of the beasts of the field, we must not forget that they are directed to their great ends by the intelligence of the human race; and that without this power, man would speedily sink below the level of the brute, and probably would shortly cease to exist.

Beautifully are the various parts of the structure fitted and adapted to each other, and to their several uses and motions. Acting by means of muscles and ligatures in a manner at once simple and combined; full of the most exquisite contrivances for facilitating the necessary operations of human life; affording such full protection to the internal parts and combining, so evidently, lightness, with the strength necessary for this purpose; gifted, moreover, with such extraordinary powers for the reparation of injury; truly may we say of the whole fabric, that it is "fearfully and wonderfully made."

SKIN. This word appears to be of Saxon origin, *scin* in that language having the

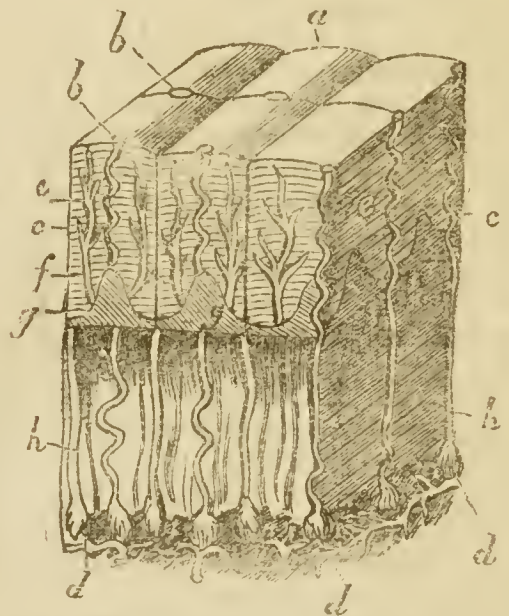


Diagram of the structure of the skin:—*a* Epidermis.—*b b* Pores.—*c c* Layers of epidermis and rete mucosum.—*e f* Inhalent vessels.—*g g* Papillæ of the skin.—*h h* Corium, or true skin.—*d d d* Bulbs of sudoriferous glands opening in the pores *b b*.

same significance; in its general application it means a covering here, of course it is referred to as that of the human frame only, than which it is in its peculiarities of structure scarcely less wonderful. Let us describe it.

Although apparently very simple in its structure, the skin is nevertheless a very compound organ; and when we consider the important functions it performs, and its relations to the rest of the body, we shall not be surprised at this. It is not only the seat of common sensation, but by means of the vapour it constantly emits in the form of perspiration, it becomes the great regulator of the heat of the body. For these purposes it is supplied with nerves, blood-vessels, and glands.

On examining a portion of Skin from the palm of the hand, or sole of the foot, from without inwards, we find that externally it presents a number of furrows, or lines, which are tolerably constant in particular parts of the body. On the elevations between these lines are seen a number of minute openings (*b b*) which are the terminations of the glands (*d d d*) that yield perspiration. These furrows and pores are in the upper layer of the skin, called epidermis (*c c*), or scarf Skin. This membrane is in some parts very thin, not exceeding $\frac{1}{250}$ th of an inch in thickness, whilst in others, as in the sole of the foot and the palm of the hand, it is at least $\frac{1}{2}$ th of an inch thick. It is this portion of the Skin which is elevated when what are called blisters are formed. When examined with the microscope, it is found to consist of minute flat cells, which have been formed below, and are gradually thrust upwards. Below this, but for the most part continuous with it, is another series of layers of cells (*c c*), and which were called, at one time, by the name *rete mucosum*, as it was supposed to be a separate membrane. The real nature of these layers of cells is, that they are all secreted on the surface of a tough fibro-vascular membrane, called the *corium*, or true skin (*h h*). The cells of the lower layer, called the *rete mucosum*, are softer and much less compressed than those which form the epidermis. It is amongst these cells that a certain set are found which are termed pigment cells. When separated they have a very distinct form, and are easily distinguished from all the other cells by their dark colour. This dark colour is dependent on the presence, in the cells, of a number of flat, rounded, or oval granules, not more than the $\frac{1}{20000}$ of an inch in diameter. Now, it is found that these cells are always present in the skin of the dark-coloured races of mankind, and also in those parts of the skin of fair races which are of a dark colour. It is, then, to the presence or absence of these cells that the skin is indebted for its white or black colour. Where

they are very abundant, the skin has a black colour; and in proportion to their diminution are the various shades called red, yellow, brown, brunette, which are observed amongst the various races of mankind.

Occasionally there are born amongst the black races individuals in whom these pigment cells are not developed, and they remain white throughout their lives. In certain parts of the body these cells are found in fair races, as in the hair and the eyes, but even amongst these races such individuals are born. They are known by the name of *Albinos*, and are remarkable for white hair, and the absence of pigment cells in the eyes, which give the interior of these organs a red colour, from the blood-vessels reflecting the colour of the blood. This occurrence is also not unfrequent amongst domesticated animals. From these facts we must regard the dark colour of the skin as due to the constant action of light, upon a system in which there is a natural tendency to develop the pigment cells. See also *Ablution, Absorption, Perspiration, Secretion, &c.*

SKIN BOUND. This is an affection, peculiar to infancy, originating in chronic inflammation of the cellular membrane. The whole surface of the body swells and becomes hard, and the skin is cold and tightly bound. It may be relieved by warm baths, and gentle aperients.

SKIN DISEASES. Various classifications of these troublesome forms of disease have been attempted; that by Wilson is based upon division of the skin into *derma*, *glands*, and *hair follicles*, the first including as a matter of course the epiderma, the second being diseases of the perspiratory glands, and the third including those of the sebaceous follicles, and the fourth those of the hair and its follicles; there are in this arrangement numerous subdivisions into which we need not enter.

In the old system of Willan, Skin Diseases are divided into eight groups, founded upon the form of the eruption; they were: 1st, *Papulæ*, or Pimples; 2nd, *Squamæ*, or Scaly; 3rd, *Erythemata*, or those with rashes; 4th, *Bullæ*, those with blebs; 5th, *Vesiculæ*, those with vesicles; 6th, *Pustulæ*, with pustules; 7th, *Tuberculæ*, with tubercles; 8th, *Maculæ*, with spots. This arrangement, as being the most obvious in its characteristics, is perhaps the best for a popular description. We shall here include only the most common of the skin diseases, for the rarer sorts are those which only a professional eye can distinguish, and which are not open to domestic treatment.

A *Papular Eruption* is distinguished by the presence of a papula, or pimple: the two most common forms of this are *Lichen* and *Prurigo* (both of which see); of the former we have a well-known example in the *Red gum* of infants, sometimes called *Tooth rash* and *White gum*. The latter appears thus far to have in a great measure baffled inquiry as to its nature and origin; some attribute it to nervous irritation: old persons are troubled with a peculiar form of it, which has been called *Prurigo senilis*, which sometimes spreads nearly over the whole of the body, and is very difficult to cure. Children are seldom troubled with this form of disease, which most usually shows itself in persons of middle age. The proper treatment is salines and mild aperients; sometimes bleeding, at others Mercury, or Arsenic, should be given, but this should be under proper direction. A lotion composed of Hydrocyanic Acid 1 drachm, Glycerine 3 drachms, and Water sufficient to make half a pint, will be found useful to allay the itching; baths at a high temperature should be used, and a tolerably generous diet taken. See *Prurigo*.

Scaly Eruptions include *Lepra* and *Psoriasis*, (for a particular account of both of which see those heads.) There is some doubt as to whether these should be considered as separate diseases: at all events, the treatment would be very similar. The constitutional remedies are almost confined to Arsenic and Pitch: for local application there is nothing better than this Lotion:—Chloride of Zinc, 12 grains; Glycerine, 1 ounce; Water, 11 ounces.

Rashes. Under this head are included *Erysipelas* and *Erythema* (which see); also *Nettle Rash* and *Rose Rash*, an account of which will be found under their proper heads. The term *Exanthemata* applied to this class of Skin Diseases, also includes the eruptive fevers, *Measles*, *Scarlatina*, &c., in which there is an inflammatory condition of the Skin, accompanied by redness of the surface. *Blebs* are large vesicles filled with thin serous fluid, exactly like those caused by burns and scalds; an account of these will be found under the head *Blains*.

Vesicular Eruptions are characterized by small elevations of the cuticle, having a glassy appearance, and generally containing lymph; this may be either transparent or opaque, colourless, or of a pale straw tint; they differ only from *Blebs* in the smallness of their size. The most common of these eruptions is *Herpes*, often called *Tetter*, of which the breaking out about the mouth of young people may be considered as the most

simple variety; it is attended by itching and swelling of the part, a number of vesicles appear, which, in a short time, run together, and form an irregularly-shaped blister, containing acrid lymph, which inflames any part of the skin which it touches. When this has escaped, a brown scab forms over the place, and protects it until there is a renewal of the healthy cuticle. This form of the disease is called *Herpes labialis*. The same kind of eruption occurs in various parts of the body, and is named according to its locality. (See *Ringworm*, *Shingles*, &c.)

In this group is also placed *Eczema*, or *Running Scall*, which sometimes spreads over nearly the whole of the body; when in its simple form, it shows itself on the hands, it can scarcely be distinguished from *Scabies* or *Itch*, for which it is, no doubt, often mistaken. This eruption often presents itself under two aspects, being vesicular at the bends of the joints, and scaly on the plain surfaces. (See *Scall*.)

Pustular Eruptions. These are circumscribed elevations of the cuticle, containing pus, and ending in scabs or crusts; (for an account of these, see *Pustules*, with their several varieties, described under the heads of *Acne*, *Ecthyma*, *Impetigo*, and *Porrigio*.) Under this head are sometimes placed Boils and Carbuncles, which at first undoubtedly arise from slough of the true skin, although the disease afterwards extends to the cellular membrane. One very troublesome form of Pustular eruption is *Sycosis*, or *Chin Welk*, which always occurs on the chin, or other part occupied by hair follicles, which appear to be the seat of the inflammation; these pustules, which surround the roots of the hair, are hard, pointed, and very painful, and the scabs which succeed them, when removed in the operation of shaving, leave red shining tubercles, which in time sink to the level of the surrounding skin. This form of disease is by no means common.

Tubercular Eruptions are hard, solid, circumscribed swellings of the cutis, with or without an inflamed base; they are of a chronic character, and end in resolution, suppuration, or ulceration; the only form of this class which is at all common is *Lupus*, sometimes called *Noli me tangere*, or *Corroding Tetter*. This generally appears in the face, and commences as a thick, hard, red swelling of the skin, which is gradually covered with a brown scab, without any tendency to destructive ulceration, or with ulcerating edges which gradually extend, eating away the skin and subjacent tissues; the progress of this disease is steady al-

though slow, and often causes frightful disfigurement of the face. Little in the way of treatment is to be done for it; palliatives only can be used, and these should be under the direction of the medical adviser. (See *Lupus*.)

Marks or Spots are discolorations of the skin which are of a permanent character; they are sometimes accompanied by a change of structure, but seldom have any effect upon the general health. (See *Freckles*, *Macula*, *Nævus*, &c.)

Corns, Warts, Moles, and other excrescences of the skin, which may be considered as diseased growths of that organ, are spoken of under their several heads, as are also the *Hair, Nails*, and other appendages of the skin, with their several affections. It would be quite useless to attempt to lay down any general rules for the treatment of this class of diseases, many of which are the most intractable and obstinate of any that the surgeon has to deal with. Although mostly agreeing in the one circumstance of arising from inflammatory action in the cuticle, or tissues directly beneath it, these diseases assume such a variety of forms and characters, and are, moreover, so modified by the constitution and habits of life of the person whom they attack, that a mode of treatment which would be beneficial in one case would probably be hurtful in another. Under the several heads referred to we have given such directions as are considered likely to be of service, in so far as domestic treatment may go. Let us now endeavour to impress upon our readers that in all these diseases, cleanliness is the great curative desideratum; without it all remedies will be of little avail; very many Skin Diseases are owing entirely to the want of proper care and attention to sanatory rules, and few of them can be completely cured without a regular and systematic use of soap and water. See *Bathing, Soap, Washing*, &c.

SKULL. (A word of Scandinavian origin, the root being probably *skal*, a shell.) It is hard thick case which encloses the brain; and forms the head, consisting of eight bones closely joined together; these are—the frontal and occipital bones, forming the dome; the temporal and parietal bones, forming the temple and sides; the sphenoid and ethmoid bones, concerned in the formation of the orbits and nose. For diagram, see *Head*, vol. i. p. 358; see also *Brain, Cranium, Scalp, Skeleton*.

SLEEP. That state or condition of natural unconsciousness in which the involuntary functions, such as those of nutrition, secretion, &c., go on as usual; but the voluntary

powers are quiescent. Sleep has been well called by the poet, "Tired Nature's sweet restorer," and, although neither the physiology nor the psychology of the state has been very clearly understood, yet the most reasonable theory is that which assigns it to exhaustion of nervous energy. "The occasional suspension of sensorial activity," says Dr. Carpenter, "is requisite for the reparation of the destructive effects of that activity; so that however unfavourable may be the external circumstances, sleep will supervene as the result of exhaustion, when this has been carried very far." Liebig puts forth the same opinion in somewhat different words, and Dr. Whewell and other eminent physiologists agree therein.

A certain amount of Sleep, then, is necessary to repair the exhaustion caused by activity, and enable men to perform the duties allotted to them. Absence of this necessity of healthful existence would bring on madness; too much of it would be likely to produce apoplexy. Children and weakly persons require more of it than others; but for a healthy adult an average of seven hours may be considered sufficient. See *Rest*.

SLING. A kind of bandage adapted for the support of a wounded limb; examples of this will be found under the head *Fracture* (vol. i. p. 292-3.)

SLOUGH. This is a dead portion of tissue, which separates from the living animal body when mortification of a part ensues; thus a Sloughing Ulcer is one in which destruction of vitality, and rejection of the tissue goes on. See *Ulcer*.

SMALL POX (Latin, *poc*, a bag or pouch). The epithet small was added in the 15th century. This, like Scarlet Fever and Measles, belongs to the class of eruptive fevers; it attacks persons of all ages, but the young are most liable to it. At no particular season of the year is it more prevalent than at any other, nor does climate appear to be influential in averting or modifying its visitations. When it occurs naturally, the premonitory *symptoms* are those of other fevers of its class; there are usually cold chills, pains in the back and loins, loss of appetite, prostration of strength, nausea, and sometimes vomiting; with young children, there are sometimes convulsions. About 48 hours after these symptoms set in an eruption of hard, red pimples begin to overspread the face and neck, gradually extending downwards over the trunk and extremities. Each pimple is surrounded by the peculiar dull red margin termed areola, and has a central

depression on the top, containing lymph; at this period the eruption is decidedly vesicular, but it becomes afterwards pustular; this change takes place on about the fifth day of its appearance, when the central depression disappears, suppuration takes place, and the vessels are filled with matter, which shortly after oozes out and dries into a scab. In about ten days this falls off, and leaves a pale purple stain like a blotch, which gradually fades, unless the disease has penetrated so deeply as to destroy the true skin, in which case a pit, or, as it is usually called, a "pock-mark" remains for life.

The primary fever of this disease lessens as soon as the eruption appears; but after this has left the face, and travelled downward, attacking successively the lower parts of the body, a secondary fever sets in, which is more severe than the first, and not unfrequently assumes a typhoid character.

Small Pox may be either *distinct*, sometimes called *discrete*; or *confluent*: in the former case, the pustules are perfectly distinct from each other; in the latter, they run into each other; this latter is the most dangerous form of the disease, the fever being more intense and rapid, and having no intermission; it goes on increasing from the first, and frequently by its violence in nine or ten days, so exhausts the system, that coma, delirium, and death ensue, preceded by convulsions, hæmorrhages, bloody stools, dysentery, and all the train of symptoms which indicate that a virulent and fatal poison has entered into the circulation.

By all this it will be evident that Small Pox is not a disease to be trifled with. As soon as the premonitory fever comes on, an emetic should be administered, and followed by a purgative of a tolerably active nature; then keep the patient on spare diet (certainly no meat), and give plenty of warm diluent drinks; keep the bowels moderately open by means of saline aperients; let the patient have plenty of fresh air, and sponge the skin with cool or tepid water, as may be most agreeable, to diminish the heat of the body. Sometimes there is not energy in the system to develop the pustules with sufficient rapidity; in this case, nourishment and stimulants should be given in the form of broths, wine, whey, &c.; warm, or mustard foot-baths should also be resorted to, and to allay irritability, a 10 grain Dover's powder may be administered at bed-time, or a $\frac{1}{2}$ of a grain of Morphine, in Camphor mixture. A good nourishing diet will be required in the secondary stage of the fever, and if it assumes a typhoid cha-

racter, the treatment should be the same as that of typhus fever. Frequently the face is much swelled, and the eyelids closed; in this case, rub the latter with Olive Oil, and bathe the whole with Poppy fomentation. If the throat is sore, use a gargle of Honey and Vinegar, 1 tablespoonful of the former, 2 of the latter, added to a $\frac{1}{2}$ pint of Water or Sage Tea. If there is much headache, cut the hair close, apply mustard poultices to the feet, and a spirit lotion to the head; to reduce itching, apply to the eruptions a liniment composed of Lime Water, and Linseed Oil, equal quantities; to check diarrhœa, give Chalk Mixture with 5 drops of Laudanum in each dose; if perspirations are too copious when the eruptive fever has subsided, take Acidulated Drinks. Smearing the eruption with Mercurial Ointment, or puncturing each pustule, and absorbing the pus with wool or cotton, has been recommended, to prevent the deep pitting which is so great a disfigurement to the face.

There is no disease more certainly and decidedly contagious than this; after imbibing the poison a period of 12 days generally elapses before the commencement of the fever, and during this time no inconvenience may be experienced. Besides breathing the effluvia arising from a person attacked, Small Pox may be communicated by inoculation with the matter of its pustules, and the resulting disease being of a milder character, this method was formerly much practised to guard persons from a spontaneous attack; since, however, the introduction of Vaccination by Dr. Jenner this practice has been abandoned. This disease is frequently epidemic, and the statistics of its different visitations show that the mortality of those attacked who have not been vaccinated is 1 in 4, whilst of those who have, it is not 1 in 450; a strong argument this for *Vaccination* (which see). Until the time of Sydenham, Small Pox and Measles were considered to be modifications of the same disease; it is a subject of dispute whether the former was known to the ancients. Rhazes, an Arabian physician, is the first author who expressly mentions it, and he confounds it with Measles; in scientific language it is now called *Variola*.

SMELL. The sense, as we have already explained (see *Nose*), resides in the olfactory nerves, which are distributed over a membrane, that lines the nostrils and spreads over the interior surface of several bones of the face, called "spongy bones," into the frontal and sphenoidal processes. Odours

which enter by the nostril are taken cognizance of by this expanded nerve, which stands as it were sentinel over the mouth, and gives warning of the approach of any deleterious substance. There are also attached to the organ of smelling other delicate nerves, which are excited into action by any stimulant like snuff and ammonia, and this, even although the true olfactory nerve be deprived of its sensibility.

SMOKING. This, if it be not already one of the "darling vices" of our age and country, is fast becoming so. Every boy of sixteen now smokes—not because he likes it, but because it looks manly, as he fancies. So the pipe comes as naturally as the hat and the "stick-up" collars; and it were well if it had no more pernicious effect. To say nothing of the desire for drink which it engenders, of the habits of extravagant expenditure to which it leads, it is of itself destructive of health and energy. The first effect of tobacco-smoking is that of a stimulant, the secondary effect that of a sedative; there is a paralysis of the nervous system, which, although extremely minute in degree, produces a dreamy state of calm repose, which is pleasing enough, but very enervating both to mind and body. It has been sometimes urged that, after smoking, the mind is capable of more profound and concentrated thought, and it may indeed seem so; but this is not that there is really any accession of mental power, which is, indeed, diminished by the effect of the narcotic, but that the physical sensations are rendered less acute, and, therefore, less disturbing to the mind. "But we generally find," says a modern authority of the smoker, "that when it is necessary that his thinking and observant powers should be used together, he is less effective than his non-smoking neighbour."

There can be no doubt that smoking tends greatly to check perspiration; the secretion which should pass off by the skin is determined to the kidneys—that the proper action of the former organs is impaired, the excretion of the urine increased, and also the tendency to urinary disorders. It is but seldom that a person much addicted to smoking has a florid complexion: he becomes pale and sallow, and often feels, if he does not complain of, pains in the head and loins, and costiveness, all arising from impaired nervous energy: there is, too, in old and inveterate smokers a flabbiness and want of tension about the muscles generally, and especially of those about the heart. Actual paralysis is more frequent than is generally suspected, a result of this pernicious habit,

whose universal indulgence threatens to undermine the stamina of the rising generation, and greatly impair the hitherto indomitable energy of the Anglo-Saxon race. See *Tobacco*.

SNAKEROOT. See *Senega*.

SNEEZING. This is caused by irritation of the extremely sensitive membrane which lines the nostrils; it is a convulsive or spasmodic effort to expel the cause of irritation by sending the air forcibly through the passage; it is generally a symptom of cold, influenza, or measles, or some other disease which involves the respiratory passages; when violent and long-continued, it is most likely to be relieved by emetics.

SNOW BLINDNESS. An affection of the eyes, common to Esquimaux and others much exposed to the glare of snow. As a protection to the eyes, persons living in snowy countries frequently wear a kind of goggles, called *Snow Eyes*, made of very light wood, and resting on the bridge of the nose, like spectacles.

SOAP (Latin *Sapo*). This may be described as a kind of salt formed by the combination of oil or fat with alkali. The purest and best is that called Castile, or curd Soap. It is, or should be, made with olive oil and soda. Common Soap contains resin and other materials; soft Soap is made of oil and potash; it frequently contains train oil, and other impurities. Soap, in its action on the human system, is anti-acid, diuretic, and purgative; it is a common ingredient in pills, especially in those in which the purgative resins are used, because it renders them more soluble in the stomach; it is sometimes employed in large doses to dissolve lithic calculi in the bladder. The common dose is 10 grains; but as much as a drachm may be given.

Applied externally, Soap is a rubefacient; it enters into the composition of the compound Soap Liniment commonly known as Opodeldoc, and other lubricating preparations; it is also an ingredient in several cerates and plasters, being a detergent in cutaneous diseases, and forming in combination with other materials a good protective covering for wounds, &c., being less irritating than the resin plaster often proves. In the Compound Soap Pill of the Pharmacopœia it is used merely as a vehicle for the Opium, of which 1 grain is contained in a 5 grain pill. The Compound Sulphur Ointment, useful in itch, contains a proportion of Soft Soap.

SODA. An alkali obtained from the ashes of marine plants; it was formerly called mineral alkali, from its being found native

in mineral seams and crusts: in which state it was also called *Natron*, *Kelp*, and *Barilla*, these being, properly, impure carbonates of Soda.

Many preparations of this substance are used medicinally: indeed, it is one of our most valuable remedial agents; in its general action it is anti-acid and anti-lithic, diuretic, diaphoretic, and antiphlogistic; it is given in dyspepsia, heart-burn, flatulency, gouty and rheumatic affections, lithic deposits in the urine, coughs and mild inflammations. We give a list of its principal forms of administration:—

Carbonate and Bicarbonate, the latter being formed by saturating the former with carbonic acid gas; it is more generally used than the carbonate, being milder and less irritating; dose, from 1 to 10 grains for children, from the latter quantity up to a drachm for adults; Effervescing Draughts and Soda Water are prepared from this.

Acetate, Citrate, and Tartrate. The first is a white soluble salt, with a pungent bitter taste; given in doses from a scruple to a drachm as a diuretic, from 2 to 4 drachms as a purgative; the second and third are formed when an effervescing draught is made of the carbonate, with citric or tartaric acid.

Borate. (See *Borax*.)

Potassio-Tartrate. (See *Rochelle Salt*, and *Seidlitz Powders*.)

Phosphate. Made by adding a solution of the carbonate to one of the superphosphate of lime obtained from bone earth; this is a mild saline cathartic, having little taste; it is therefore less likely to cause nausea than some others; it may be safely given in fevers and inflammatory affections even of the bowels, and to pregnant women; it is a good solvent for lithic deposits, and is therefore useful in gouty and rheumatic disorders; it is given to ricketty children with the intention of supplying the deficiency of phosphoric acid in the bones. Dose, as an antilithic, &c., from 1 to 2 drachms; as a purgative, from $\frac{1}{2}$ an ounce to three times the quantity, in gruel or broth.

Sulphate and Bisulphate. The former is largely produced in the manufacture of the carbonate from common salt; it was at one time a favourite aperient medicine, and was generally called *Glauber Salts* (which see).

The latter is a cooling purgative resembling the bisulphate of potash; it is obtained as a residue in making hydrochloric acid. The dose is from $\frac{1}{2}$ a drachm to 2 drachms, as a diuretic; from 2 to 6 drachms as a purgative.

Sulphate and Hydrosulphate. The first of these substances has been recommended by Dr. Hassall and others, for destroying fungous growths in the stomach and elsewhere; it is also said to be useful in the treatment of Asiatic cholera. The dose is from $\frac{1}{2}$ a drachm, to twice or thrice that quantity. The hydrosulphate is used in photography as a solvent for iodide of silver; it is also used to destroy parasitic vegetation in the same way as the former preparation. On the Continent it is given as an alterative in skin diseases, and it may be given as a purgative in the same way as the Sulphate—dose, 10 grains to a drachm; as a cathartic, 2 to 4 drachms.

Chloride of Sodium. (See *Common Salt*.)

Valerianate of Soda. This is prepared by oxidising fusil oil by means of bichromate of potash, and combining it with caustic soda to form the salt. It possesses the odour and properties of valerianic acid, and is sometimes given as an antispasmodic; but its chief employment is in the manufacture of other valerianates.

Chlorinated Soda owes its properties to the large proportion of chlorine which it contains; it is a good antiseptic and deodoriser, and is sometimes administered as a stimulant and anti-putrescent in typhus and other malignant diseases, as well as in chronic affections of the liver. Externally, it is applied, largely diluted, to foul indolent ulcers, and the sores caused by some cutaneous diseases; it is also used as a gargle in putrid sore throat, and a mouth wash, where there is fetid breath from decayed teeth or ulcerations; as well as in local baths for hepatitis, &c.

There are other preparations of Soda which are sometimes employed medicinally, but the above are all we need mention, except

SODA WATER, which, when properly made, contains about 20 grains of the bicarbonate to the half pint, and is strongly impregnated with carbonic acid gas; it is best prepared in a machine, or a gazogene (like that represented in Vol. I., p. 317), although it may be prepared for immediate use by dissolving 2 scruples of bicarbonate of soda in half a pint of Water, and adding $\frac{1}{2}$ a drachm of Tartaric Acid. In Thomson's "Guide for the Sick Room" we find the following receipt which we have found very useful in many cases:—"Heat, nearly to boiling, a teacupful of milk, and dissolve in it a teaspoonful of refined sugar; put it into a large tumbler, and pour over it two thirds of a bottle of Soda Water. This is an excellent mode of taking milk when the stomach

is charged with acid, and consequently is apt to feel oppressed by milk alone."

SODIUM is a peculiar metal of which Soda is a protoxide, it was discovered by Sir H. Davy in 1807, a few days after he had discovered *Potassium*.

SOFTENING, called by the French surgeons *Ramollissement*. A term applied to a diminution of the natural and healthy consistence of organs, as of the brain, which commonly occasions paralysis.

SOLANIN. The active principle of the *Solanum Dulcamara*, or Bitter Sweet, in which it is combined with malic acid. See *Woody Nightshade*.

SOLAR PLEXUS. An assemblage of ganglia, which are distributed to all the divisions of the aorta. See *Ganglia*.

SOLEUS (Latin *solea*, a sole). A muscle of the leg shaped like the fish called a sole. It arises from the head of the fibula, &c., and is inserted into the os calcis; its office is to extend the *Foot* (which see).

SOLIDS. These are bodies, the cohesion of whose particles is so strong, that they can be moved only as a combined mass, being the opposite of *Fluids* (which see).

SOL-LUNAR INFLUENCE. This is the influence which is supposed to be produced on various diseases by a conjunction of the sun and moon. Thus it has been noticed that paroxysms and exacerbations in fever take place often at spring tides, and the crises of neap tides. Whether this is owing to any peculiar electrical state of the atmosphere at such times, we cannot tell; and, therefore, without professing any great belief in planetary influences, we simply allude to the fact.

SOLUTION (Latin *solvo*, to dissolve). This is first, the result of an affinity between bodies in different states with regard to cohesion. Liquids are called *solvents*, because they act upon, or hold in solution, either solids or gaseous substances. The influence of heat upon the power of Solution corresponds with the difference between cohesion and elasticity. Upon solid bodies it generally increases the power of the solvent by diminishing their cohesion: upon aeriform bodies it diminishes the power, by adding to their elasticity.

Solution also means a fluid which contains another substance dissolved and intimately mixed with it. The solutions of the Pharmacopœia are now called *Liquors* (which see).

SOMNAMBULISM (Latin *somnus*, sleep, and *ambulo*, to walk), Sleepwalking. It is not very uncommon for persons to fall into this curious state, which appears to be one be-

tween waking and sleeping. It is one of those psychological phenomena which, like mesmerism, is as yet very imperfectly understood. Somnambulists are thought by some to be endued with a kind of clairvoyance, or inner sight, which is diffused over the whole body, but is especially seated at the epigastrium and the fingers' ends. Notwithstanding which, however, the sleep-walker is liable to dangerous falls, and other accidents; it is therefore necessary that he should be carefully watched and guarded; above all, he should be never rudely nor suddenly disturbed when in this state, as a fright or shock of any kind may be attended with very serious results.

SOPHISTICATION. A term applied in pharmacy to the *adulteration* of any drug.

SOPORIFICS (Latin *sopor*, profound sleep). These are substances which produce sleep, (see *Narcotics*,) sometimes called *Hypnotics*.

SORBIC ACID. An acid obtained from the berries of the Mountain Ash, called by botanists *Sorbus*, or *Pyrus Aucuparia*. This and malic acid appear to be identical: its salts are called *Sorbates*.

SORDES. The viscid matters discharged from ulcers, &c.

SORE BAY. A disease which is endemic at the Bay of Honduras; it commences with an ulcer, and is considered by Dr. Moseley as true cancer.

SORE THROAT. This is commonly a symptom of inflammatory fever, and is often the result of a simple cold; some persons are peculiarly liable to it, and experience great difficulty of swallowing from relaxed *Uvula* (which see). Sometimes in Sore Throat, there is simply inflammation of the mucus membrane, and when this is the case it will, probably, pass away in a day or two, with a little careful nursing and aperient medicines. Should it extend into the air passages, causing cough and catarrhal symptoms, it becomes a more serious business, and medical advice should at once be sought. In the meantime a Saltpetre gargle should be used, or Sal Prunella balls, one being put into the mouth occasionally and allowed to dissolve; hot bran poultices may also be placed about the throat, which, at a later stage may be rubbed with a liniment of Oil and Hartshorn.

There is an erysipelatous form of Sore Throat which is highly dangerous, and requires very active treatment: a strong gargle of Lunar Caustic must be used in this case, or the inflamed part must be pencilled with the Caustic in the stick; if it extends to the larynx and air passages this frequently proves fatal. This is a distinct

form of disease from Diphtheria, which has recently proved so fatal. See *Throat*, *Cynanche*, *Quinsy*, *Croup*.

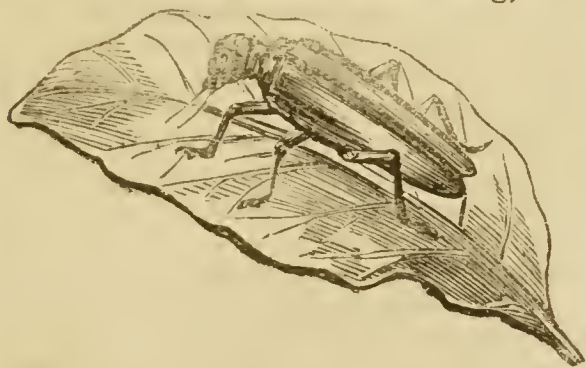
SORY. The ancient name for sulphate of iron. (See *Copperas*.)

SOUND. This is the name given to a surgical instrument used for exploring the cavities of the body; it is most commonly introduced into the bladder to ascertain the presence of calculi. To ascertain by the use of the stethoscope, or other means of auscultation, the condition of the lungs, is commonly called "to sound" a person. See *Auscultation*, *Percussion*, *Stethoscope*.

SOUP. This is the substance of any kind of flesh dissolved by boiling; it varies in character according to the principal ingredient, seasoning, &c. Rich soups should never be taken by invalids nor persons of weak digestion: for such, *Beef Tea* and *Broths* are best. (See those heads.)

Portable Soup is flesh freed from fat and all putrescent matter, boiled down to a jelly, and evaporated; it may be had in the form of cakes, which may be quickly made into Soup by pouring boiling water on them, and seasoning with salt, &c.; it will keep good for years, and is admirable for a sea voyage. See *Preserved Provisions*.

SPANISH FLY or *Blister Beetle*. This is the *Cantharis Vesicatoria* of naturalists, an insect about $\frac{3}{4}$ of an inch long, found



abundantly in the south of Europe, but rarely seen alive in England; it claims a place here by virtue of its stimulant and rubefacient properties; taken inwardly it acts especially on the urinary organs; it is sometimes given in paralysis of the bladder, obstinate gleet, and, but rarely, as a diuretic in atonic dropsy; dose of the Powdered Flies, from $\frac{1}{2}$ a grain to 2 grains; Tincture, from 10 minims to 40, increased gradually; Extract, from $\frac{1}{4}$ to $\frac{1}{2}$ a grain; great caution is required in the administration of this irritant poison. See *Cantharides*, *Lytæ*.

SPARGANOSIS (Greek *spargao*, to tumify). A term applied by Dioscorides to puerperal tumid leg, or what surgeons now call *Phlegmasia dolens*.

SPASM (Greek *spao*, to draw). This is an irregular contraction of the muscles: it may be divided into three kinds, 1st *Constrictive Spasm*, attended with contraction or rigidity, sometimes both, as *Locked Jaw*, *Tetanus*, *Wry Neck* (which see). 2nd *Chronic Spasm*, the violent agitation of one or more muscles in sudden or irregular snatches, as *Hiccough*, *Sneezing*, &c. (which see); 3rd, *Synchlonic Spasm*, the tremulous, simultaneous, and chronic agitation of various muscles, as *St. Vitus' Dance*, *Shaking Palsy*, &c. (which see).

Spasm in the Stomach constitutes one form of *Colic* (which see), it is not of unfrequent occurrence, and may, generally, be traced to the presence of some indigestible matter. Its symptoms are sudden and violent pain in the bowels, eructation of wind, and, probably, attempts at Vomiting. Pressure and warm applications frequently relieve the pain for a time, but the offending substance must be discharged before permanent relief can be afforded. A dose of Castor oil, with 10 drops of Laudanum, and 10 of Essence of Peppermint, or else, given in Brandy and Water will, probably, be effective; or 6 drachms of Tincture of Rhubarb with the above quantity of Laudanum. If there is a disposition to vomit, it may be encouraged by an emetic and plenty of warm water. After either of the above, give a tablespoonful of this mixture every half hour until the bowels are freely relieved, and the pain abated:—Rhubarb and Carbonate of Soda, of each 1 drachm, Aromatic Spirit of Ammonia 2 drachms, Laudanum $\frac{1}{2}$ drachm, Water 6 ounces. When the attack has passed off, great attention should be paid to the state of the stomach so as to prevent a recurrence.

Spasm of the Heart sometimes occurs in peculiar states of that organ; its symptoms and mode of treatment are described under the head of *Angina Pectoris*.

Spasm of the Urinary Passages is, generally, the result of irritation caused by gravel in the *Bladder* (which see), also *Urine*. Heat is the best application for immediate relief, in all cases of colic cramp, or Spasm, and one that may be safely resorted to.

A treatise on Spasms or Convulsions, is sometimes called *Spasmology*; and to the spasmodic grin described under the head *Risus Spasmodicus*, the name *Spasmus Cynicus* is sometimes applied.

SPATULA or **SPATHULA** (Latin diminutive of *spatha*, a slice). A kind of blunt flexible knife used by apothecaries for various manipulations; the blade is generally of steel or

iron, with a wooden handle; but, sometimes the whole is of bone, being intended for those substances which have a chemical action on the metal; the cut represents an



ordinary iron spatula suitable for domestic use. The spatula used for spreading plasters is of a different make altogether. See *Plasters*.

SPA WATER. The term Spa has of late been applied to any mineral spring, but it belongs properly to that of the town of that name in Belgium, situated about 30 miles from Aix la Chapelle. The water of this spring is a highly carbonated chalybeate, containing in the pint $\frac{2}{3}$ ds of a grain of Oxide of Iron, and 15 cubic inches of Carbonic Acid Gas, with but a very small quantity of aperient Salts: hence it is more heating and astringent than most chalybeate waters.

SPEARMINT. This is the *Mentha Viridis* of botanists, of the natural order *Labiata*, a common British plant found in marshy places. Like its congeners, Peppermint and Pennyroyal, it is valuable for its carminative and aromatic properties, which reside in its volatile oil, of a pungent and



peculiar odour; the dose of this is from 2 to 5 minims in Sugar; of the Spirit, the dose is from $\frac{1}{2}$ to 2 drachms; and of the Infusion 1½ ounces; given every two hours or so, this sometimes allays sickness. The Dis-

tilled Water is employed chiefly as a vehicle for other medicines.

SPECIFIC. If a medicine acts on a particular organ, or uniformly checks any particular disorder, we say that it has a Specific action, such is the case with cinchona in intermittent fever, and mercury in syphilis. A quack medicine is generally vaunted as an infallible or universal Specific; there is no such thing known.

SPECTACLES. These common aids to defective vision appear to have been invented towards the latter part of the thirteenth century, at all events, this is the earliest recorded period of their use in this country. They are employed, as our readers are aware, to relieve the inconvenience caused by short sight, long sight; to supply the absence of a natural lens after an operation for cataract; to protect the eyes from too strong a glare of light, whether of the sun or artificial; and by their magnifying powers to enable aged and otherwise weak sighted persons to see clearly, objects which, without such assistance, would be dim, or altogether invisible to them.

To answer these different purposes, Spectacles are made with either concave, convex, or coloured glasses; and it is in the exact degree of convexity or concavity, and particular make and adjustment to peculiar cases, that their utility depends.

Concave Glasses are intended for short-sighted persons, they are made of various degrees of concavity, so as to suit every form of convexity of the cornea; it is only by trial that one can ascertain the exact degree required for a particular case, a higher degree of concavity than that numbered 6 or 7 is seldom wanted.

Convex Glasses are for long-sighted persons, who find it difficult to distinguish objects close to them: they are seldom required to be of high power at first, but from time to time the power has to be increased. For persons who have lost the lens by operation, a very convex glass has to be used.

Coloured Glasses are either of green, blue, or grey: the latter are sufficient for trifling cases, and as any kind of work can be seen through them, they do not interfere with the ordinary occupations. For cases of inflammation, which are aggravated by light, and where there is a weakened or irritated condition of the nerve, the dark blue or green should be used; those which are made with a hinge, with a double lens, are best, as they prevent the light from entering at the side.

The accuracy and truth of grinding glasses is of very great importance. Their surfaces

ought to be perfect segments of circles ; but of this few unprofessional persons can form a correct judgment. The cheap Spectacles are mostly of soft glass, which are merely cast, and afterwards polished ; they easily scratch, and soon become covered with defects, so that they injure rather than assist the sight of the wearers. Those called "pebbles," if they are truly such, are much harder, and are carefully ground, so as to be perfectly crystalline, and free from flaws of any kind. In the long run, it is always most economical to use such, and to go to a respectable optician, who, if he charge a somewhat high price, gives the result of his skill and experience (which is surely worth something), and who will, moreover, change the glasses as often as may be necessary, provided they do not quite suit.

How to choose good Spectacles ? is a problem which has puzzled thousands. We do not pretend to enable our readers to solve it ; but, putting aside a deal of nonsense and quackery which has been said and written on the subject, we advise them to use only such as are pleasant to the eyes, and never to have a higher magnifying power than they are absolutely obliged. Let them begin with the lowest that will enable them to see with sufficient clearness, and increase it only when the necessity comes. This it will do quite soon enough, for the eye cannot be kept long at the same pitch ; and there will in most cases, especially in old age, be increasing flatness of the cornea, which will render imperative a corresponding increase in the power of the glasses.

It is very essential that the framework of Spectacles should fit comfortably to the head, and be of such form as to bring the centre of each lens exactly opposite to the centre of the eye it is intended to cover.

The endless variations met with in the width between the eyes, the total width of the face, and the form of the nose, render it frequently difficult to suit an individual out of even a very large stock. Convex Spectacles, being used for viewing near objects, may generally be placed lower down upon the wearer's nose than those used by short-sighted persons, who are compelled to hold up their heads in an awkward manner, unless the glasses rest naturally in such a position as to enable him to see distant objects with the head erect. This is accomplished by having the bridge between the glasses nearly on a line joining their centres. The oval form is usually preferred for the lenses, because it allows most room for the motion of the eye in a lateral direction, without giving unnecessary weight.

The *Periscopic Spectacles* of Dr. Wollaston were contrived in order to allow considerable latitude of motion to the eye without fatigue, by confining the shape of the glasses to that of the eyes. This is effected by the use of lenses, either of a meniscus or of a concave convex form, the concave side being in both cases turned towards the eye. Divided Spectacles, each glass consisting of two half lenses, are sometimes used, the upper half of each glass being occupied with a concave lens, or one of very slight convexity for seeing distant objects, and the lower half has a strong magnifier for examining things near the eye.

From what has been stated above, it is evident that much care and judgment are required in the choice of Spectacles. The specious name of "Preserver" has been given to convex glasses of 36 inches focus ; and many persons have entertained an opinion that such spectacles have the property of arresting the progress of that natural change, by which most individuals become long-sighted as they become older ; but this opinion is entirely without foundation. The only Spectacles to which the wearer can with propriety apply the name are those which are suited to his particular case. Such Spectacles, although they cannot stop the natural changes of the eye, may greatly diminish their inconvenience, and even retard their progress, and, therefore, may not unfitly be termed preservers ; but few things can be more injudicious than the use of Spectacles before they are actually wanted, under the fallacious idea that they will maintain the sight unimpaired, notwithstanding the organic changes which accompany increasing years. See *Light*.

STRANGUARY (Greek *strango*, a drop, and *oyron*, urine). Applied to temporary suppression of the urine, which is only passed in drops and with great pain : this is not unfrequently caused by the application of a blister. Demulcent drinks, taken freely, and hot fomentations of the part, will generally afford relief. The following mixture will also be of service :—Bicarbonate of Soda and Nitrate of Potash, of each 1 drachm ; Tincture of Hyoscyamus, 2 drachms ; Mucilage of Acacia, 1 ounce ; Camphor Mixture, 6½ ounces : take two tablepoonsful every six hours.

SPECULUM (Latin for a mirror or looking glass). In surgery an instrument used for dilating and keeping open, certain parts of the body, in order to their careful examination. It is made with a bright interior so as to reflect light on the part, hence the name.

SPEECH. A wonderful faculty is human speech ! we constantly exercise it without thinking of the many curious mechanical contrivances by which we are enabled to utter vocal sounds, and of the mysterious communication between mind and matter, which determines the nature of those sounds. We cannot, however, dwell upon this here, as we intend to say more about it when we come to speak of the *Voice and Vocal Organs*.

We shall, at present, briefly allude to Speech as an indication of a healthy or unhealthy condition of the whole, or part of the human system. Distinctness of Speech we look for from one whose bodily health is good, and articulative organs properly formed, and unaffected by disease. When the Speech is not distinct, we know that there must be some organic defect, or some functional or other derangement, probably of a nervous character. Thickness of utterance is a symptom of intoxication, here the disorder is nervous, as it also is in paralysis and other diseases of the brain. *Stammering* is rather a functional disorder than a disease, we shall have more to say on this under its proper head. Indistinct articulation in young children is sometimes the result of their being what is called "Tongue tied," the organ being too much confined in its motion by the natural bridle or *Prænum* (which see), also *Tongue*.

SPERMA (Greek *sperio* to sow). The seminal fluid. (See *Semen*.) From this root we have the terms 1st. *Spermatic*, belonging to the testes, as applied to arteries, veins, &c. ; 2nd. the *Spermatic Cord*, which is composed of the large excretory duct of the testes, called the *vas deferens*, the spermatic artery, and vein, &c. ; 3rd. *Spermatocele*, a swelling of the spermatic vessels, or of those of the testicles ; 4th. *Spermatorrhœa*, seminal weakness, brought on, generally, by habits of criminal self-indulgence, impotency ; involuntary emissions of semen, and other distressing symptoms, are the concomitants of this disease, for which we can prescribe no mode of treatment, suitable alike for all cases, except it be entire discontinuance of all the practices which caused it ; tonic and strengthening medicines ; a regular and temperate life, with gentle exercise, sea bathing, and a tolerable generous diet. We have more than once in these pages cautioned the victim of vicious indulgences against putting any trust in advertising quacks ; they cannot be speedily cured, except by such means as are likely to entail bad after-consequences. See *Impotency, &c.*

SPERMACETI (Greek *sperma*, semen, and *ketos* a whale). A substance obtained from the head of *Physeter macrocephalus*, or Sperm Whale, a species inhabiting the southern oceans. Chemical analysis shows that a hundred parts of Spermaceti consists of 60 parts of margaric and oleic acids, 40 of ethal, and 9 of a yellowish extractiform substance. It is bland and demulcent, with considerable nutritive qualities when taken internally. Its chief employment however, is externally, as an ingredient in cerates and ointments. One of the best healing applications for cuts, &c. is the Spermaceti Ointment, or Simple Cerate, made with this Substance, White Wax, and Olive Oil.

SPHACELUS (Greek *sphazo*, to destroy). Complete *Mortification* (which see) : it is generally preceded by imperfect mortification or *Gangrene* (which see). There is a kind of Sphacelus which sometimes attacks young children about the mouth or cheeks, or the external parts of the female organs of generation. Besides other names it has been termed *Necrosis Infantilis*, *Gangrenous Aphthæ*, and *Water Canker*.

SPHENOID (Greek *sphen*, a wedge, and *eidōs* likeness). Wedge-like, as applied to a bone of the skull, which wedges in, and locks together, most of the other bones. *Sphenoidal*, from the same root, is a term applied to the wedge-like fissures and cells of the Sphenoid bone, and *Sphenopalatine* relates to the parts connected with the Sphenoid bone and the palate.

SPHINCTER (Greek *sphinno*, to constrict). The name given to a muscle whose office is to close the aperture around which it is placed ; thus the *Sphincter ani*, which arises from the extremity of the rectum, and is inserted into the point of the *os coccygis* closes the anus ; it also draws down the bulb of the urethra.

SPICA (Latin for a spike or ear of corn). A name given to a bandage, because its turns are thought to resemble an ear of corn.

SPICES. These vegetable products, on account of their stimulant and stomachic properties enter largely into medical treatment ; as condiments, if used in moderation, their action is, no doubt, beneficial ; but habitually taken, as they often are, in excess, it must be far otherwise. For a more particular account of the different kinds of Spices, see the several heads of *Cinnamon*, *Cloves*, *Ginger*, *Mace*, *Nutmegs*, *Pepper*, &c.

SPIDER'S WEB. The cobweb collected from cellars, barns, &c., has been applied from time immemorial to superficial cuts, &c., to arrest the bleeding ; it has also been given internally, as a remedy for ague, and as

a sedative in irritable states both of the body and mind; it is said, in some cases, to have a more tranquilizing effect than opium, henbane, or any other narcotic; it has also been given in asthma with marked good results. The dose is from 10 to 20 grains at bedtime, made into a pill; for ague, it should be taken three times a day.

SPIGELIA MARILANDICA. The scientific name of the Perennial Worm Grass which is a native of the southern states of North America, and it is one of the most powerful anthelmintics known. In this country we commonly call it Pink Root; it belongs to the natural order *Spigeliaceæ*, so called from Adrian Spigelius of Padua, who first dis-



covered the properties of the plants composing this order. This plant is also a purgative, and to some extent a narcotic; the root, which is the part used, has a faint odour, and a peculiar and unpleasant taste. When given for worms it should be followed by a brisk cathartic; the dose is from 10 to 20 grains for a child: from 1 to 2 drachms for an adult, repeated morning and evening for some days. See *Vermifuges*.

SPILUS (Latin for a spot). A congenital spot which appears to consist of a partial thickening of the rete mucosum, being sometimes of a yellowish brown, at others a bluish livid, or nearly black colour. See *Nævus*, &c.

SPINA BIFIDA (Latin *bis*, twice, and *findo*, to cleave). Literally, the cloven spine. This is, first, a disease attended with an incomplete state of the vertebræ, and a fluid swelling commonly situated in the lumbar region; second, an imperfect ossification of part of the cranium, which is covered by a tumour similar to the above;

it sometimes occurs on the heads of children.

SPINACH. Of this well-known garden vegetable there are two species generally cultivated; one is the Prickly, and the other the Round-leaved Spinach, called by botanists *Spinacia Oleracea* and *S. Galtia*;



they belong to the natural order *Salsolaceæ*, or Saltworts; they may be eaten cooked in various ways, or raw in salads; they are wholesome and agreeable, but contain little nutriment. See *Vegetables*.

SPINA VENTOSA. A term first used by Arabian writers, to designate a disease in which matter formed in the interior of a bone, and afterwards escaped beneath the skin. The pain attendant on this disease was termed *Spina* by writers antecedent to the Arabians, who added to it *Ventosa*, from its resemblance to *Emphysema* (which see). In later times the term has been frequently applied to *White Swelling* (which see).

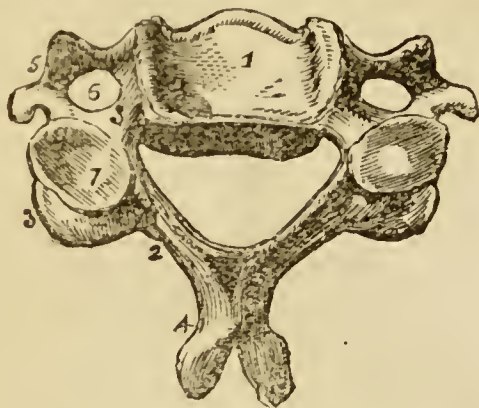
SPINAL MARROW. This is the *Medulla spinalis* of anatomists; the Spinal cord, or great channel of nervous sensation, which, issuing from the brain through the occipital foramen, passes down through the hollow above described as far as the second lumbar vertebræ, below which it separates into a number of branches called the *Cauda Equina*, or horse's-tail. See *Nerves*.

SPINE. As the great main channel of nervous sensation, and the principal support to the bony frame, this is one of the most important parts of the human structure; it is sometimes called the vertebral column, being composed of a number of vertebræ, or short single bones, so named from their peculiar construction, the term coming from the Latin *verto*, to turn; these bones turning upon each other in such a manner as to give flexibility to the Spine, which is the

first developed portion of the skeleton in man, and the centre around which all the other parts are produced. "In its earliest formation," says Wilson, "it is a simple cartilaginous cylinder, surrounding and protecting the primitive trace of the nervous system; but as it advances in growth and organization, it becomes divided into distinct pieces, which constitute vertebræ."

These admit of division into true and false: the true vertebræ are 24 in number, and are classed according to the three regions of the trunk which they occupy, into *cervical*, *dorsal*, and *lumbar*, the first having 7; the second 12, and the third 5 pieces. The false vertebræ consist of 9 pieces united into 2 bones, called the *sacrum* and the *coccyx*, the first having 5, and the last 4 pieces."

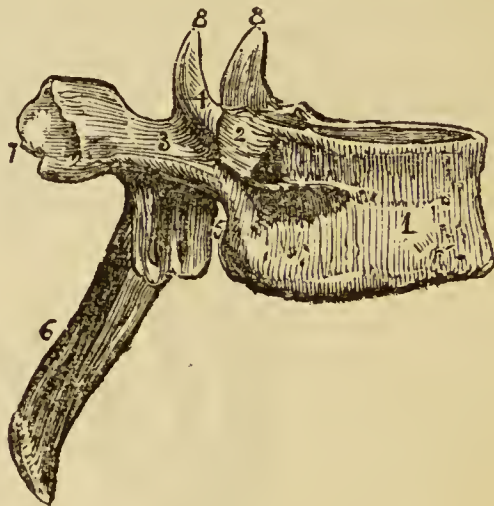
By the aid of the annexed diagram, the peculiarities of construction will be best understood: this represents a central cervical vertebra, seen in the upper surface; 1 is the body, concave in the middle, and rising on each side into a sharp ridge; 2, the lamina, of which there is one on each side, commencing at the posterior part of the body by a pedicle (3), and expanding and arching backward, to meet the other, the two enclosing a foramen or opening, through which the spinal cord passes; 4, is the bifid spinous process, and 5, the bifid transverse



process: these are both intended for the attachment of muscles; it is the succession of the former projecting along the middle line of the back, which has given rise to the common name of the vertebral column—the Spine; 6, marks a vertebral foramen, there is a corresponding one on the other side, through these pass the vertebral artery and vein, and plexus of nerves; 7 and 8, are the superior and inferior articular processes, the first looking upwards and backwards, the last downwards and forwards, of these there are four in each vertebra, they are designed to articulate with the vertebra above and below.

The upper vertebra of the *cervical* region, termed the *atlas*, because it is the immediate support of the head, differs somewhat from this in shape; so also does the second, called the *axis*, and the seventh or last, termed *prominens*.

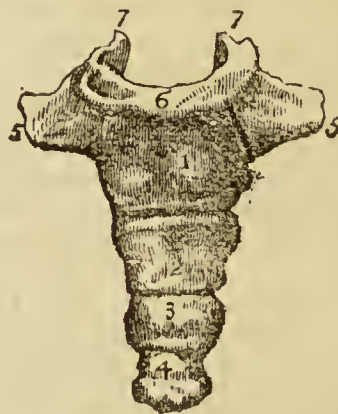
The following is a lateral, or side view of a dorsal vertebra, which will serve to render the foregoing explanation yet clearer:—1 is



the body; 2 2 articular facets for the heads of the ribs, these are not present; 3 pedicle; 4 and 5 superior and inferior intervertebral notch; 6 the spinous process, which is thicker and more projecting than in the foregoing example; 7 is the extremity of the transverse process, marked by an articular surface, for the extremity of a rib; 8 and 9 the two superior and two inferior vertebral processes.

In the lumbar vertebræ are the largest pieces of the whole column; here the body is large and broad, and thicker before than behind; the pedicles very strong, and the laminae short, thick, and broad, as is also the spinous process.

The following cut represents the coccyx (Greek *kokkys*, a cuckoo), so-called from



its fancied resemblance to a cuckoo's beak; it forms the caudal termination, or tail of the vertebral column. 1 2 3 and 4 are the four pieces of bone composing it; 5 5 the trans-

verse processes of the front pieces; 6 articular surface for the extremity of the sacrum, which is the triangular bone composed of five false vertebræ, forming the base of the column; 7 7 being the cornua or horns which articulate with the sacral cornua.

Thus we may understand that the vertebral column as a whole, represents two pyramids, applied base to base, the upper being formed by all the vertebræ from the second cervical to the last lumbar, and the inferior by the sacrum and coccyx.

Viewed from the side, this column presents several curves, the principal of which is situated in the dorsal region, the concavity looking forwards; in the cervical and lumbar regions the column is convex in front; in the pelvic an anterior concave curve is formed by the sacrum and coccyx; a slight lateral curve also exists in the dorsal region, having its convexity to towards the right side.

Did the bodies of the vertebræ rest immediately upon each other, there would be a rigid column which could not be bent in any direction without displacement of the bones; but, to provide against this, they are separated from each other by very elastic "intervertebral cartilages," which yield to every motion of the body, and prevent that shock to the brain which must occur at every step taken, were not some such provision made. Then, again, the vertebræ thus beautifully fitted into each other, and resting upon soft yielding cushions, are braced together by a series of ligaments of different kinds, which, while they allow of all necessary motions, yet restrain it from going too far. By means of these and the muscles, which are mostly attached in a longitudinal direction, and chiefly to the posterior portions of the vertebræ, the equilibrium of the spine, and the motions of the body generally are effected.

Each vertebra having a triangular opening corresponding in position with the rest, there runs through the whole of the column a canal, which is filled with the nerve substance and membranes, composing what is called the *Spinal Cord*, that communicates with the brain through an opening in the base of the skull. (See *Brain, Nerves*.)

Diseases and Injuries. Of these the Spine is liable to a great many. There is first congenital malformation, consisting of a deficiency in the front portions of a certain number of the vertebræ, commonly those of the loins; wanting thus their natural bony protection, the membranes which line the interior part of the column are left un-

covered, and an effusion of fluid takes place, by which, under the skin, they are surrounded and guarded from injury; the fluid thus effused is confined in a thin transparent kind of bladder, which quickly assumes a livid appearance. The treatment in this case must be left wholly to the surgeon: it is seldom that he can save the child; but cases have occurred in which, by careful evacuation of the fluid from time to time, and other measures, a sufficient degree of success has resulted to afford ground for hope; at all events the trial should be made.

Concussion of the Spine is sometimes a consequence of coming too suddenly and heavily on the feet, especially on the heels; it is followed by a want of nervous energy, and a depressed state of the system altogether; there is a loss of sensation and motion in the lower part of the body, and frequently inability to pass the urine, there being, in fact, partial or entire *Paralysis* (which see).

Sometimes there is acute pain in the lower limbs, and symptoms of active inflammation may set in, which will require leeching or cupping, with hot fomentations and the usual depletive measures. In such a case, pending the arrival of the medical man, little can be done beyond placing the patient in as easy a position as possible, and applying moist heat to the lower part of the spine; an active purgative may be administered, and a dozen leeches applied to the back, should it be long before the surgeon arrives, if the patient is of a full habit and in much pain. Should the shock be but slight, the effects will probably soon pass off, but it is necessary to be cautious, and avoid any violent exertion, especially such as jumping, for a time. Often these cases are very tedious, the lost powers are recovered slowly, if at all: friction with stimulating linaments, salt water bathing, the douche bath, gentle exercise, and nourishing diet are the means to be pursued. When there is displacement of the vertebræ, which can only be caused by extreme violence, and in which case there is also generally fracture of the bone, there must be injury of the spinal cord, and if at all high up, instant or speedy death is the sure result; if low down, permanent paralysis of the lower limbs most likely ensues. (For treatment, see *Paralysis*).

Apoplexy of the Spinal Cord is not an unfrequent concomitant of *Epilepsy* (which see). With this we have convulsive twitchings, pain, and imperfect performance of the functions of motion and sensation: soothing palliative measures are the only

ones to be adopted in this case; hot bran poultices, and opiates, if there is severe pain, but these should be cautiously given, and not carried to any great extent without professional advice.

Irritation of the Spine is especially common in females, and often lies at the root of palpitations, and the hysterical affections to which they are subject. In this case a tender spot, or more than one, may generally be found on examination somewhere in the course of the spinal cord: simple pressure on one of these spots will sometimes suffice to bring on an attack of hysteria and fainting. Debility of constitution is likely to be the cause of this; therefore tonics and invigorating measures are called for. Iron and Quinine should be taken, and general and local bathing resorted to, with friction down the spine, with a course towel, or flesh-brush; in some cases a small blister over the tender part is advisable.

St. Vitus's Dance, Tetanus, or Locked Jaw, and some kinds of *Fever*, are to a great extent Spinal affections. (See those heads.)

Distortion of the Spine, or Spinal Curvature, is by no means uncommon in weakly children, and is more frequently met with in girls than boys, on account of the greater delicacy of structure in the former. Among the most common causes is the pernicious system of artificial restraint to which females are subjected, under the mistaken idea of improving their shape. Scarcely does the vertebral column attain its full growth and firmness until the age of 25, and the muscles which support it, and preserve its equilibrium, are quite sufficient for the intended purpose, if they are allowed to have full development, and free play; but if compressed, and denied the opportunity of exerting their appropriate action, by the substitution of artificial support, they lose their power, and distortion of the frame is often a consequence; for the means of support provided by art can never be so perfect as the natural ones, and sooner or later their failure is made apparent by curvature, which may be one of three kinds, viz.—1st, *Angular or Posterior*, sometimes called *Excurvation*, the convexity being directed backwards or outwards; 2nd, *Incurvation*, the curvature being inwards and forwards; 3rd, *Lateral*, the curvature being on one side, generally to the right.

In Angular Curvature the vertebræ of the neck and back are mostly affected; it may be caused by a habit of stooping, and is not uncommon in near-sighted people, and those who study much; or it may arise from the too common practice of raising children by

the open hands placed under the armpits, the pressure thus exerted upon the ribs pressing them inwards, while the Spine and breast bone are pushed outwards; by this the Spine is bent forwards so as to form an angle behind, at which angle the vertebræ, becoming displaced, and eventually diseased, yield to the weight of the body, and permit it to fall forward, thereby producing a deformity. In scrofulous children we often see this kind of curvature, arising from ulceration of the body of one or more of the vertebræ; matter is formed, which gravitates downwards, and shows itself, perhaps, in the lumbar regions, or in the groin, or the thigh. Perfect rest in the horizontal position, issues and setons in the neighbourhood of the diseased bone, good nourishing food, and attendance to the general health, is the course to be pursued in this case.

Incurvation is not a common form of Spinal deformity; it mostly occurs in the loins, giving a slight increase to the natural curvature, and causing great pressure to the abdomen; when situated at the bottom of the Spine near the pelvis, it prevents a serious obstacle to child-birth; when in the dorsal region, it diminishes the capacity of the chest, and produces a marked deformity of that part. This is, generally, associated with scrofula or rickets, or some deranged state of the general health, and the constitutional treatment must depend greatly on the cause; the local treatment should be similar to that recommended for other forms of the disease.

Lateral Curvature, or Projection of the Spine on one side, is the most common of



these deformities, and it is to this chiefly that the foregoing remarks on artificial pressure apply, because this is nearly always a result of mechanical constraint and malposition of the body. The curvature usually becomes noticeable between the ages of ten and eighteen, sometimes much earlier; it may, indeed, commence during the first years of infancy, when the spine is little more than cartilage. The practice of sitting infants upright in the arms when the back is yet too weak to bear the strain of such a position, is a fruitful cause of this deformity, which is sometimes seen in nurse maids who have been accustomed to carry a child always on one arm; and others whose employment has required a peculiar position of the body. School girls, especially those of weekly constitutions, who have to stand much, and sit on forms without backs, are very likely to have distorted spines, which are found to be more common in the higher and middle classes than the lower; those women who have active, out-of-door employment, and have been from childhood loosely clad, are seldom or ever so affected. Lateral Curvature assumes so many different forms, that it would occupy far too much of our space to describe them all, nor is this necessary; whether it be from the right to left, or *vice versa*; whether in the lumbar, dorsal, or cervical region, or extend into two or all of these, it matters not; the predisposing and exciting causes are much the same, and so also is the mode of *treatment* to which we will now direct our attention.

Here we have to grope our way through a conflict of opinions, for this is a subject on which Doctors have disagreed time out of mind. "So many writers, so much said, and yet so little information furnished; each successive author deprecating the means advised by his predecessor, and yet adding nothing to what was already known." Such is the dictum of Dr. Copeland, no mean authority, upon modern *orthopedy*, as the art of curing or remedying deformities in the human body is called. Orthopedic quacks we have in abundance, and many really scientific men have turned their attention to this subject, without, as it would seem, any very satisfactory results; as to the general principles to be applied to the treatment of these deformities. Extension, pressure, and gymnastics are the three means, or systems, usually employed to cure or remedy Spinal deviations; each has its advocates and advantages, and each has its disadvantages, which in many cases are fatal to its successful application; there can be no doubt that *extension*, that is stretching of

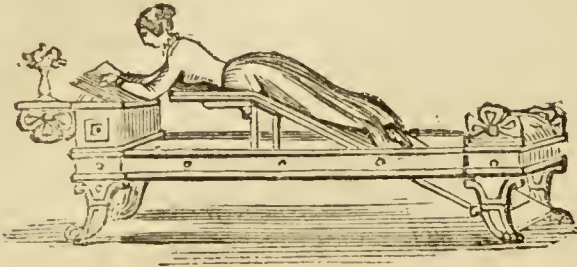
the whole spinal column, in order to overcome muscular contraction on one side, and straighten the column, weakens it by separating the vertebræ, lengthening the sinews and ligaments, and so destroying their force; it would seem the better mode to apply an opposing force on the side opposite to that towards which the curvature inclines, to overcome the resistance of the contracted muscles; (for it must be remembered that the muscular fibres, unlike a piece of cord that will remain loose when tension is no longer kept up, contracts and so keeps always tight;) and to overcome also, the force of gravitation acting on a body which, from the deflection of the Spine, has a downward inclination. *Pressure* again, the system which has had the most extensive application, after the one last named, cannot, as we think, be depended on to straighten a crooked Spine, although undoubtedly it has had a beneficial effect in very many cases. The pressure of stays, corsets, and light bands, may keep the body upright during the time of wearing them and so far they are useful: but very rarely is a permanent cure effected by such means; and frequently they do great mischief by compressing the thorax and rendering its cavity too small for the proper action of the important viscera therein, such as the heart, lungs, &c.

Gymnastics, which means exercise in a certain prescribed form, is undoubtedly useful in the case of Spinal deviations, but other means are required also, and the system of rational orthopedy propounded and practised by Dr. Riofrey appears to us the best among the many modes of action recommended. This consists in the application of an opposing force, as before mentioned, by means of straps and bands passing over the shoulder to which the curvature inclines, and downward to the opposite side of the body; it is necessary to success that the force should be applied with the greatest nicety, according to that which it is intended to overcome and that it should be withdrawn as soon as the desired object is attained.

"The compound force of different tractions is the point to be attained," says Dr. Riofrey; "but anatomists alone can succeed with the proper knowledge of organization—the anatomist alone can understand which are the muscles requiring an additional force, and in what manner must be directed the parallelogram of simple forces." Therefore to the surgeon should be confided a case of Spinal deformity, for he only will know exactly how and where to apply the

necessary force, and in what manner and how long to apply it.

Among the mechanical contrivances—and they are many—recommended for this class of deformities, we may mention the Patent Orthopedic Sofa, invented by Mr. Coles: it is capable of adjustment, so as to form a prone couch, as here represented, on which



the patient can recline in a comfortable position, and read or work, as may be desirable; and also an apparatus for the rowing, swimming, sawing, and stretching exercises, all of which are useful as far as gymnastics will go.

SPIRITS. A general term applied to all inflammable liquors, obtained by distillation, as Brandy, Gin, &c. The first Spirit known in Europe was made from grapes, and sold under the name of *Alcohol* (which see). The Genoese afterwards prepared it from grain, and sold it under the name of *Aqua vite*. In most countries, civilised or uncivilised, some kind of intoxicating drink is taken; thus the Mexicans have their *Aqua ardiente*, distilled from *Pulque*, which is the fermented juice of the Agave. In India, the Palm Sugar, called *Jaggery*, and other vegetable products, is converted by the same process, into several kinds of *Arrack*. In the Phillippine Isles, they make *Tabu* from Palm Wine; the Tartars distil their *Araka* from *Kournis*, which is fermented mare's milk; and the Egyptians their *Araki* from the juice of dates. The Siamese have their *Lan* prepared from rice; the Dalmatians their *Rakin* from the husks of grapes, mixed with aromatics. At Dantzic we find *Rossolio*, a compound of Brandy, various kinds of which, distilled from wine, figs, peaches, apples, and other fruits, are drunk all over Europe, North and South America, in parts of Asia, and wherever wine is made. *Troster* is made on the Rhine from the husks of grapes fermented with barley and rye; *Sekis-kayavodka*, in Scio, from the lees of wine and fruit. The Hollander has his *Geneva* or *Hollands*, distilled from malted barley and rye, and flavoured with juniper berries, and varieties of this Spirit are with us far too well known under the name of *Gin*, *Glenlivat*, *Whiskey*, *Mountain Dew*, *Potcen*, *Innishowen*, and other popular de-

signations. At Dantzic, also, from wheat, barley, rye, with aniseed, cinnamon, and other spices, they make *Goldwasser*. In Switzerland, from the Malachab cherry juice, *Kirchwasser* is prepared; and in Dalmatia, from the Moruska cherry, *Maraschino*. In the West Indies and South America, the juice of the sugar cane is distilled into *Rum*, of which at Kamtschatka, they have a variety made from sweet grass, and called *Statkaiatrava*. From the lees of *Mandarin*, a wine made of boiled rice, the Chinese distil *Chow-chow*; and the Sandwich Islanders, from the Tea-root, baked, powdered, and fermented, prepare *Y-wer-a*; while the Affghans, from ewes' milk, make an intoxicating liquor; and, going again to Kamtschatka, we find, under the name of *Muehumer*, another kind of spirit. Many more might be named, for men have in all ages been ingenious in providing the means of sensual indulgence. (See *Alcohol*, *Distillation*, *Beverages*, *Drinks*, *Liquors*).

The chief Spirits used medicinally are the following:—

Compound Spirits of Ether and Spirits of Nitric Ether (which see), Aromatic Fœtid and Simple Spirits of *Ammonia* (which see), Spirits of *Allspice*, *Aniseed*, *Camphor*, *Carraway*, *Cassia*, *Cinnamon*, *Horse-radish*, *Juniper*, *Lavender*, *Nutmeg*, *Pennyroyal*, *Peppermint*, *Rosemary*, *Spearmint*: for properties and doses of which see several heads of chief ingredients.

Rectified Spirit is mostly distilled from malt; it should have a specific gravity of about 840. Proof Spirit is one-third weaker, having a specific gravity of about 920: this strength is commonly used for making *Tinctures* (which see), although for some the stronger sort is required. Brandy is called in the Pharmacopœia *Spiritus Vini Gallici*—Spirit of French Wine; it is among the most valuable of medicinal agents. (See *Brandy*, also *Stimulants*).

Spirit Lotions, on account of their rapid evaporation, are often applied to inflamed surfaces to keep them cool; in sprains and other injuries they are most valuable. The following is a good form of preparation:—Take of Rectified Spirit of Wine 2 ounces; or Brandy, strong Whiskey, or Geneva, a quarter of a pint; rain water, or that which has been previously boiled, a pint; rags wet with the lotion to be kept constantly on.

Spirits is also a term synonymous with nervous power or energy, a low or high condition of which is indicated by a corresponding elevation or depression of the Spirits;

frequently, but not always, does this correspond with the bodily strength and health. Low Spirits not unfrequently become, as it were, chronic, passing into confirmed *Hypochondriasis* (which see, also *Nervousness*.) The remedies are tonic and stimulating medicines, change of air and scene, bathing and exercise; indeed, anything which tends to divert the mind, and restore strength and activity to the body.

SPITTING OF BLOOD. See *Hæmoptysis*.

SPLANCHNON (Greek for a viscus). Hence we have the terms *Splanchnology*, a description of the viscera; *Splanchnic Nerves*, of which there are two pairs, distinguished as the great and small, the former passing behind the stomach and terminating in the semi-lunar ganglion, and the latter communicating with the former, and terminating in the renal *Ganglion* (which see).

SPLEEN. This organ is, in the lower animals, called the *Melt*. It is a spongy viscus situated in the left hypochondriac region, between the eleventh and twelfth false ribs; it is of an oval figure. The ancients considered the Spleen to be the seat of all ill-humours, such as melancholy, anger, or vexation; hence the term *Splenetic*, applied to those who are cross and crabbed. From the same root we have also *Splenalgia*, pain in the Spleen; *Splenitis*, inflammation of the Spleen, which may be either acute or chronic; *Splenius*, a muscle resembling the Spleen; it brings the head and neck backwards laterally, or directly backwards. *Splenization* is a change induced in the lungs by inflammation, making them resemble the substance of the Spleen. This state differs from hepatization in the absence of granules, and is consequently darker and more uniform in texture. In this state it very much resembles that condition of the lungs produced in *Pneumonia* (which see), and which Laennec calls *Carminification*.

SPLINT BONE. The small bone of the leg is popularly so called; surgeons term it the *Fibula* (which see).

SPLINTS are long thin pieces of wood, tin, gutta percha, or other suitable substances used to keep the ends of fractured bones in their places, so that they may unite; and for supporting injured parts generally; they are made of various shapes and sizes, and should form part of the stock of surgical instruments and apparatus which accompanies the family medicine chest, especially if intended for the use of emigrants. In our article on *Fractures* will be found full directions for the application of Splints.

SPLIT CLOTH. This is the technical name

for a kind of head bandage, consisting of a central piece with six or eight tails; the one called the four-tailed, or single split cloth is the most convenient for the forehead, face or jaws. See *Bandages*.

SPIDIUM (Greek *spodos*, a cinder). A name sometimes given to the oxide of zinc, which sublimes during calcination. See *Zinc*.

SPONGE. This well-known porous substance, once thought to be a vegetable product, but now proved beyond doubt to belong to the animal kingdom, being the covering or habitation of a marine zoophyte; besides its utility as an absorbent of moisture, and cleanser in surgical cases, it has long been given as a remedy in bronchocele, scrofulous diseases, enlargement of the prostate gland, &c.: the form of administration is that of Burnt Sponge (*Spongea Usti*); its efficacy appears to depend upon a certain proportion of iodine which it contains; the dose is large, being from 1 to 3 drachms; it may be made into an electuary with honey or treacle.

Prepared Sponge used as pledgets and tents for keeping open the apertures of discharging wounds, is made by dipping the Sponge in melted wax plaister, and then pressing it between hot iron plates. When cold it may be cut into any required shape.

SPONGEO PILINE is a useful invention of recent date; it is intended as a substitute for the poultice, and is formed of Sponge cut up into fragments and felted into a mass with cotton wool; a layer of this mingled material is backed with waterproof varnish, which prevents the evaporation of the liquid absorbed by the soft material, which, when applied to an inflamed surface, keeps moist for a long time; it is a very cleanly and convenient application. See *Poultices*.

SPORADIC. (Greek *speiro*, to sow). A general term for diseases arising from occasional causes, such as cold, fatigue, &c., showing themselves in individual cases, and not attacking numbers at once like *Epidemics* (which see).

SPRAIN OR STRAIN. This is the effect of over-stretching or tearing the ligaments of a joint; it is an accident very likely to occur, especially in the wrist and ankle bones, and is productive of extreme pain, sometimes causing faintness and vomiting. There is, generally, effusion of blood beneath the enlargements, hence the discoloration of them, observable in these cases; commonly, also, there is rapid swelling, which renders it difficult to ascertain whether a dislocation or fracture has not taken place, therefore, if

the injury is severe, a surgeon should be consulted. Not only are Sprains excessively painful at the time of their occurrence, but they are likely to lead to permanent injury, especially if neglected, and in this case they are more difficult to cure than either dislocations or fractures. Dr. South says—"It would be better to break a limb than sprain a joint, the former in 99 cases out of a 100, being cured in the course of a few weeks, if the skin has not been broken, whilst the effects of the latter may, at best, remain for weeks or months, as weakness or stiffness of the joint."

In the treatment of Sprains, perfect rest of the injured part is essential. We do not mean to say that they are never cured without this, but never so speedily and completely; and, without it, there is always great danger of bad after-consequences; therefore, the patient, as soon as it has been ascertained that there is nothing more than a Sprain, should take to his couch or sofa, and remain perfectly quiescent, especially if the injury is in the ankle or knee, or any part of the leg, in which case the limb should be kept in a horizontal position with warm moist flannels applied to the joint by day, and a warm bread-and-water poultice at night; should this not reduce the swelling and subdue the pain, in the course of 24 hours, leeches may be applied and repeated two or three times if required. When the tenderness has, in a measure, subsided, a piece of lint dipped in vinegar, or diluted acetic acid, may be laid over the part; this will, probably, bring out a pustular eruption of the skin, and divert the low inflammation from the ligaments, at a time when stimulating friction could not be borne. When the pain has entirely ceased, and the joint has resumed its usual appearance, great caution is necessary in using it, as irreparable mischief often results from doing so too much or too early. If it continues swollen, it should be bound up with straps of soap plaister, or a roller. (See *Bandages*). But before binding, plenty of friction with Soap Liniment and Turpentine should be tried, and a stream of Cold Water poured from a considerable height, as directed under the head *Douche Bath*.

If the injury is in the elbow or wrist joint, the arm should be sustained in a sling, and never suffered to hang down. Persons of full habit will require active purgatives, especially if the inflammation runs high; and if the pain is very severe, so as to prevent sleep, an opiate may be taken at bed time, 10 grains of Dover's Powder is, perhaps, the best, or 5 grains of

Extract of Hyoscyamus, if Opium cannot be taken.

SPRUCE BEER. A liquor made of the Essence of Spruce and Treacle; it is well boiled, and then fermented. The *Essence of Spruce* is made by boiling the young branches of the Norway Spruce, *Abies Excelsa*, and evaporating the decoction to the consistence of treacle.

SPUTUM (Latin *spuo*, to spit). Any kind of *Expectoration* (which see), also *Nummular* and *Mucus*.

SQUAMA (Latin for a scale). Hence come the terms of *Squamæ Ferri*, Scales of Iron, being the black oxide which is obtained in the form of scales: *Squamous*, the name of a suture of the cranium, so called from its edges covering like scales; this is also the name of the scaly portion of the temporal bone.

SQUILL, in Latin *Scillæ*. This is a plant of the natural order *Siliaceæ*, which grows on the sea shore of nearly all countries bordering on the Mediterranean. It is sometimes called the Sea Onion, having bulbous



roots which contain a viscid acrid juice, so volatile that the vapour arising from it, when a bulb is cut in pieces, irritates the nose and eyes; the juice blisters the fingers, if suffered to remain on. The roots, sliced and dried, form transparent slips, which have a bitter taste. In small doses, the

Squill is expectorant, diaphoretic, and diuretic; in large, emetic and purgative; in very large doses, the acrid principle which it contains is likely to render it poisonous. As a diuretic, the Squill is generally given in dropsies; as an expectorant, in chronic bronchitis; it is usually combined with other medicines, as ipecacuanha, pargoric, &c. Its chief officinal preparations are the Compound Squill Pill, dose from 5 to 15 grains; Vinegar and Oxy-mel of Squills, dose from $\frac{1}{2}$ to 1 drachm; Tincture of Squills, dose from 10 to 30 minims. The dose of the Powder, as an expectorant, is about 1 grain.

SQUINTING. This affection was formerly called *goggle-eye*, hence the term *goggles* is sometimes applied to the peculiar kind of glasses, used to cure the complaint; the French term these glasses *masques à louchette*, or squinting guards. Squinting is an affection in which the optic axes of the eye are not directed to the same object; it may sometimes be cured by wearing the above mentioned glasses for a time, but seldom otherwise than by an operation, which is generally effectual if properly performed—which it can only be by a surgeon. The scientific name of this affection is *Strabismus* (which see).

STACTE (Greek *stacto*, to distil). The kind of myrrh which distils, or falls in drops from the trees, is so called; as is also a more liquid amber than is generally met with in commerce. From the same root we have *Stagma*, a distilled liquor, a name by which Vitriolic or Sulphuric Acid was sometimes formerly called.

STAFF. The instrument used to direct the gorget or knife with which lithotomy is performed.

STANNUM. See *Tin*, of which the Proto-chloride is called *Stannate*.

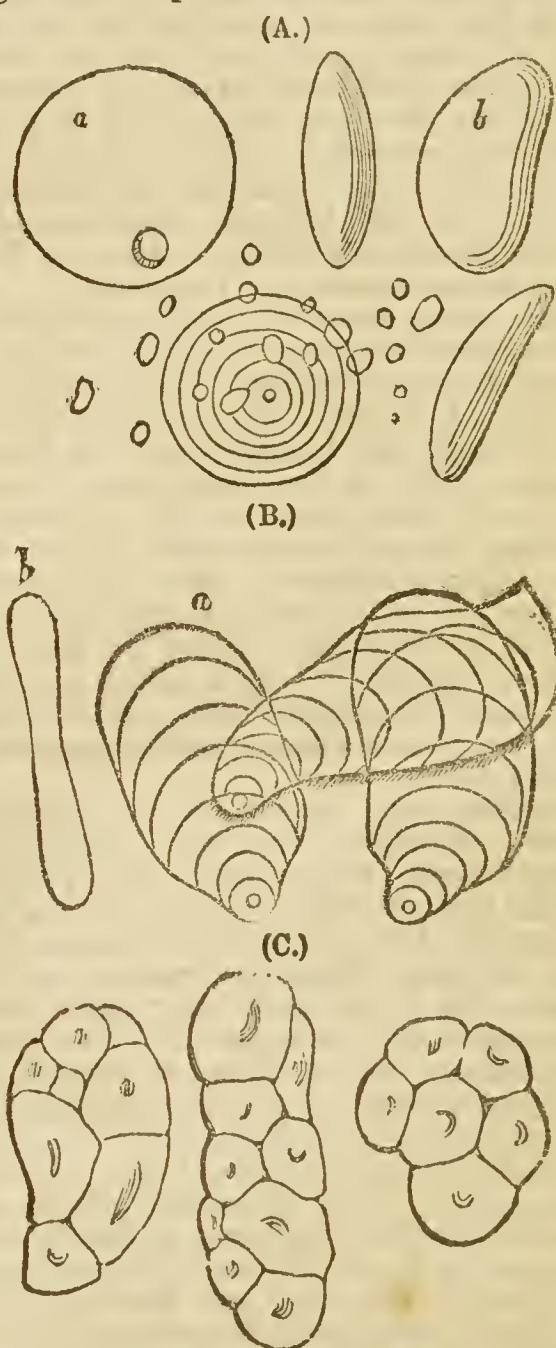
STAPES (Latin for a stirrup). A name given, on account of its shape, to one of the small bones of the internal Ear (which see). A small muscle attached near the mastoid cells, and inserted into the head of this bone, is called *Stapedius*.

STAPHYLOMA (Greek *staphyle*, a grape). An eye disease consisting of an increase in the size of the cornea, and almost invariably accompanied by opacity more or less dense. There are several species of this which we need not describe, as only an oculist could enter into their nice distinctions. See *Eye*.

STARCH. In the vegetable kingdom this is a very widely diffused body. In almost every growing cell granules of Starch may be distinguished by means of the micro-

scope. These granules are of various sizes, and assume a great variety of forms; some are round, others are flat, whilst others are even stellate. These granules are always found mixed with other substances, but they are easily made distinguishable by the application of a little iodine, which is one of the best tests for Starch, and which, coming in contact with it, produces a beautiful blue colour.

Starch is found in some plants in greater quantities than in others; it is however, very generally found in perennial roots and rootstocks, in the stems and in the seeds of plants. It seems stored up in these parts for the future growth of the developing organs of the plant. There are few or no



GRANULES OF STARCH.

(A.)—From wheat and barley. (B.)—From arrow-root. (C.)—From Portland sago.

vegetables or parts of plants that are eaten, that do not contain Starch. We find it in turnips, carrots, potatoes, cabbages, parsnips, beans, peas, wheat, barley, oats, and the rest of the Cerealia; in chesnuts, walnuts, hazelnuts, and all other seeds; in the apple, the pear, the plum, the cherry, and all other fruits. In many of these things, however, it is not the distinguishing alimentary ingredient, but it is often separated and used pure as an article of diet. The substances in which it exists in a tolerably pure form, are *Arrow-root*, *Sago*, and *Tapioca* (which see).

We cannot too strongly impress upon our readers that it is not of itself a nutritious form of food. Sago, Tapioca, and Arrowroot, should, on this account, never form the entire or principal part of the diet of young or old; and there are many vegetables which contain so large a quantity of Starch that they should only be eaten with food containing more nutritive matter: among these may be named the *Parsnip*, *Carrot*, *Turnip*, *Cabbage*, *Asparagus*, *Sea Kale*, *Spinach*, and *Vegetable Marrow*. (See those several heads, and *Vegetables*.)

The Latin name of Starch is *Amylum*; it has demulcent properties which render it useful in irritated states of the bowels, and rectum; $\frac{1}{2}$ an ounce dissolved in a pint of water being the proper proportion for an enema, which is used either alone or as a vehicle for other remedies. In the form of powder, Starch is dusted on the skin to absorb irritated secretions, and allay inflammation; it is this which is so largely employed in the nursery under the name of *Infants' Powder*. Starch enters into the Compound Tragacanth Powder of the Pharmacopœia, and is a perfect antidote to poisoning by *Iodine*.

STAVESACRE. A plant of the Crowfoot family, botanically known as *Delphinium Staphisagria*, whose seeds are violently emetic and cathartic; they are never given internally, but are employed as an application to some cutaneous eruptions, and to destroy lice in the head, being in the latter case mixed with hair powder. The active properties of the seeds appear to reside in an alkaloid which has been extracted and called *Delphine* (which see).

STATICE CAROLINIANA. The scientific name of the Marsh Rosemary; of the natural order *Plumbaginaceæ*, or Leadworts; the root is bitter and very astringent, and is given in dysentary and diarrhœa, like catechu or kino; but it is most used to make a gargle for aphthous and malignant sore throat. (See cut top of next column).



STAYS. There can be little doubt that the preponderance of chest diseases of females over those of men in this country, as shown by the returns of the Registrar-General, is owing in a great measure to the unnatural compression of the organs by tight lacing. Andrew Combe, in his "Physiology applied to the Preservation of Health," says:—"The pressure of stays impedes the flow of blood to the muscles, which, being therefore imperfectly nourished, waste away; they lose their healthy colour, and become pale and flabby, and their contractive power diminishes. Hence, in order to produce injurious consequences, a degree of pressure is sufficient far below what is requisite to cause distortion of the chest, and compression of the respiratory and digestive organs. Stays and corsets in many instances, give rise to consumptions; and I have seen one case in which the liver was deeply indented by the pressure, and long-continued ill-health and ultimate death was the consequence."

Every medical practitioner could cite numerous instances in support of this testimony against an absurd and injurious practice. Dr. Ryan, writing "On the Diseases of Women and Children," says:—"Stays are injurious; they prevent the growth of the chest, impede the breathing and action of the heart; cause palpitation, and render the compressed parts a load on the lower part of the spine, which bends on one side. Want of proper exercise and tight lacing are the causes of spinal curvature in girls; and hence we can scarcely see a young lady with a straight back."

Again, Dr. Gregory, in his "Comparative

View of the State and Faculties of Man with those of the Animal World," tells us that "the common effect of this practice (tight-lacing) is obstruction of the lungs, from their not having sufficient room to play, which, besides tainting the breath, cuts off numbers of young women in the very bloom of life. But nature has shown her resentment of this practice in a very striking manner, by rendering half the women of fashion deformed in some degree or other. Deformity is peculiar to the civilized part of mankind, and is almost always the work of our own hands."

To such testimony as this we need add but few remarks of our own. We know that there are cases in which some support for the chest is absolutely necessary, but this may be obtained by means of an elastic corset, which shall afford the required degree of support, without undue compression, and especially without that clasp-in of the waste which is considered essential to gentility. (See *Dress, Tight-lacing*.)

STEARINE (Greek *steao*, suet). A solid crystallizable substance, one of the proximate principles of *Fat* (which see), and *Elain*. An acid procured from soap made from potash and suet or hog's lard, is called *Stearic Acid*; and one procured by distillation from Castor Oil is *Stearo-Ricinic Acid*.

STEATOMA or **STEATOCELE**. This is the name given to a wen, or encysted tumour, commonly seated in the scrotum, containing a fat-like matter. See *Wen*.

STEER'S OPODELDOC. A nostrum once in high repute for the cure of rheumatic and other affections of the like nature: it differed but little, if at all, from the common *Opo-deldoc* (which see).

STELLA. A roller bandage applied in the form of a figure 8, so as to keep back the shoulders, and so named from its forming a cross or star on the back; it is sometimes called a *Stellated Bandage*.

STERILITY (Latin *sterilis*, barren). Impotence in the male, inability to conceive in the female. See *Barrenness*.

STERNUM. This bone is situated in the middle line of the front of the chest; it is oblique in direction, the upper end lying within a few inches of the vertebral column, the lower being projected forwards, so as to be placed at a considerable distance from the spine. The bone is flat, or slightly concave in front, and is marked by five transverse lines, which indicate its original subdivision into six pieces. It is convex behind, broad and thick above, flattened and pointed below, and divisible in the adult into three

pieces, which are called the superior piece, or *manubrium*; the middle piece, or *body*; and the inferior piece, which is the smallest of the three, and is often merely cartilaginous; it is called the *Ensiform* or *Xyphoid cartilage*. (For diagrams in which the Sternum is represented, see *Ribs*.) Several muscles take their names from a connection with this bone:—for instance, the *Sterno-clavicular*, a ligament extending from the Sternum to the clavicle.

STERNUTATORIES (Latin *sternuto*, to sneeze). These are substances which, when applied to the pituitary membrane, cause a discharge from the nostrils, either of a mucous or a serous fluid, and generally, also *Sneezing* (which see).

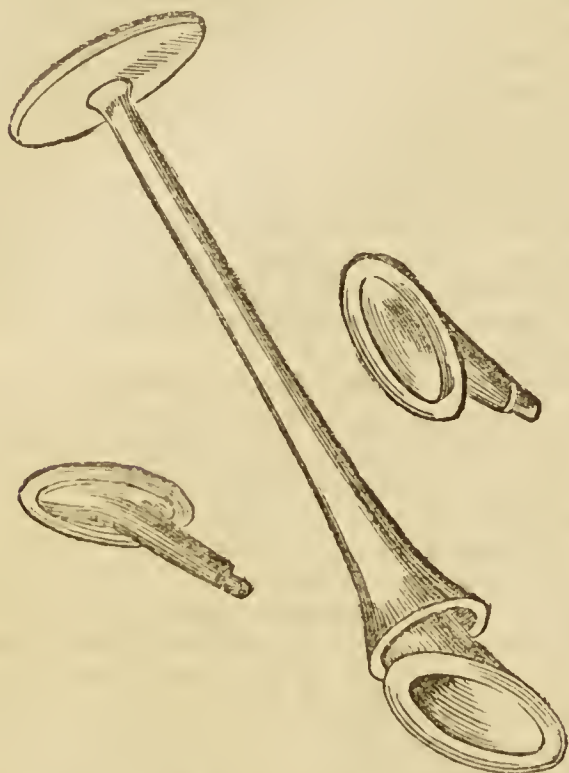
STERTOR (Latin *sterto*, to snore). Stertorious breathing, or snoring, as it is commonly called, occurs in apoplexy and states of coma; with heavy sleepers it is common enough, and need not cause any alarm.

STETHOSCOPE (Greek *stethos*, the breast, and *okopeo* to examine). This instrument which has now become indispensable to a proper examination by *Auscultation* (which see), of the organs of the chest, is simply a conductor of sound, being a cylinder of fine grained light wood, or gutta percha, perforated longitudinally in the middle; with one extremity funnel shaped, which is applied to the chest, and the other flat and orbicular with a hole in the centre, to which the ear is applied; when the Stethoscope is of wood, the ear disc is generally of bone or ivory, but when of gutta percha, it is of the same material, the whole being moulded in one piece.

Phonoscope or sound conductor would be a better name for this instrument, as expressing more clearly its object and meaning. An improvement in its construction or rather a useful addition to its advantages has recently been made.

It consists of a moveable extremity, or body piece, made of gutta percha or vulcanized india rubber, and is constructed so as to fit into the tube of any Stethoscope ordinarily used. In this case the axis of the tube is placed at an acute angle from the edge, which is applied to the patient's body. By this arrangement the Stethoscope thus provided being placed on the chest, the flat extremity, or ear piece, can be directed most conveniently to the ear of the auscultator. The advantage of such an arrangement is evident. For example, the auscultator, standing on the left side of the patient's bed, has to examine the right side of the chest, the difficulty of stretching across the patient, in such a case, is perfectly familiar to most

physicians: by this instrument this inconvenience is altogether avoided. It will be found most convenient, too, in examining the back, or axilla, when the patient is un-



able to rise; or in the case of a female whose stays it may be inconvenient to remove, or in small pox, where it may be desirable to avoid too close proximity to the patient.

STEWING. This slow process of boiling meat renders it easy of digestion, and, therefore, best fitted for invalids; by it, moreover, the juice, or gravy, which is the more nutritive part, is retained, either in the meat itself, or in the liquor, which is taken with or without it. See *Broth*.

STHENIC (Greek *sthenos*, strength). A term applied by some nosologists to cases which, according to their theory, are the result of exhausted excitability, and are marked by indirect debility. See *Asthenia*.

STIBIUM. (The Latin term for *Antimony*). Hence Berzelius described the Antimonious and Antimonic acids under the name of *stibious* and *stibic*. See *Antimony* and *Stimmi*.

STICKING PLAISTER, commonly called *Adhesive* or *Diachylon Plaister*, is the universal remedy for cuts, and no better application can be made; it is extremely useful, also, in dressing wounds, &c., to bind injured parts together, or the applications which are thought best for keeping them in their places. See *Plasters*.

STIFF JOINT. See *Anchylosis*.

STIGMA (Greek *stixō*, to prick). A small red speck, the eruption of skin diseases;

when livid they are called *Petechia* (which see, also *Skin Diseases*).

STILL BORN. It does not always follow that because an infant is born apparently dead, there is not, therefore, hopes of its ever living; efforts should be made to inflate the lungs just the same as if it were a case of suspended animation; directions how to proceed in this case will be found under the head *Infancy* (see p. 36, Vol. II).

STILLICIDIUM (Latin *stillo*, to ooze in drops, *cado*, to fall). The act of pumping upon any part was sometimes so called; as was also the discharge of the urine by drops. See *Strangury*.

STIMMI (Greek). A substance, probably antimony, which the ancients used to apply to the eyelids for the purpose of contracting them, and thus giving an unnatural appearance of largeness, which was considered a mark of beauty. See *Stibium*.

STIMULANTS (Latin *stimulo*, to prick). Medicines which quicken or augment the functions of the bodily organs. They may be divided into two classes—1st, those which produce a general stimulant effect upon the system, *Anti-Spasmodics*, *Astringents*, *Narcotics*, and *Tonics* (all of which see); 2nd, those which produce an effect upon particular parts of the system: these have often been called *evacuants*, because they occasion a greater secretion of the organs on which they act; these will be found under the several heads of *Emetics*, *Emmenagogues*, *Epispastics*, *Errhines*, *Cathartics*, *Diaphoretics*, *Diuretics*, *Scialogogues*.

Of the use and abuse of alcoholic Stimulants we have already spoken under the heads of *Alcohol*, *Ale and Beer*, *Beverages*, &c.

Of the benefit of Stimulants in certain cases and stages of disease, and therefore the propriety of their administration, there can be no question, although some have expressed doubts upon the subject. Those only who have had to deal with cases of low typhoid fevers, and utter prostration and exhaustion of nervous power, can rightly estimate their value.

STINGS. Various insects, such as the bee, wasp, hornet, &c., have the power of puncturing the skin, and injecting a poison into the wound; and this, which is called a Sting, is frequently very painful, and even dangerous, producing an inflamed state of the cuticle and subjacent tissue, which often spreads and affects the whole system. The person stung first feels an acute pain, like that caused by a prick; then there is generally a tingling sensation, followed by great heat and redness, and often by swelling of the part. *Olive Oil* is frequently applied in

such a case, and affords considerable relief; but an alkaline preparation is certainly the best—a solution of the Carbonates of Ammonia, Potash, or Soda, or a little Spirits of Hartshorn somewhat weakened with water. The wound should be first examined to see if the Sting is left in; if it is, a fine hair-like line will be seen, which should be extracted by means of small tweezers. If the swelling and pain remain after the above application, rags wet with Goulard Water should be applied, or tepid poultices. See *Inflammation*.

STITCH. A spasmodic action of the muscles of the side, accompanied with pain; it is produced by running, and may generally be relieved by rest and friction.

STOMACH (Greek *stoma*, the mouth, *xeo*, to pour). This is a membranous bag, situated immediately under the diaphragm, in the human body; it varies much in size, according to the amount of distension it undergoes. When not unnaturally distended, but containing an ordinary meal, it is about ten or twelve inches in length, and from four to four and a-half inches in diameter at its widest part. It has two orifices, the one leading from the œsophagus, the other into the duodenum. The former is called the *cardiac orifice*, the latter the *pylorus*. This word comes from two Greek words, signifying a gate-keeper, and is applied to this part of the stomach on account of its function of contraction, by which it is partly closed, and the food is prevented from passing into the duodenum, except at proper intervals. This contraction is effected by a circle of muscular fibres, arranged round the lower orifice of the stomach.

The stomach itself consists of four coats or membranes, which are held together by means of the cellular tissue that we find every where entering into the composition of the parts of the body. The external of these coats consist of what is called serous membrane, and is a part of a great bag of serous membrane, the *peritoneum*, which covers the whole of the abdominal viscera, and which are thrust, as it were, into this bag from the outside, the inner sides of the bag being kept constantly moist, so as to lubricate the external part of the stomach and other organs, and thus prevent any friction from the movements of the body. The part of this membrane which covers the stomach is thin, smooth, transparent, and elastic, and immediately covers the second or muscular coat. This coat is composed of muscular fibres, which are distributed in three different directions. There is a set of fibres passing from the œsophagus

directly along the stomach. Under these is another set, which pass round the stomach in a circular manner; and under these are others, passing in an oblique direction between the two others.

These fibres, like all other parts of the muscular system, possess a power of contracting; and when the food is in the stomach, it is by means of these muscles that the food is moved round and round, and ultimately propelled to the pyloric extremity of the stomach, previous to passing into the duodenum. The direction of the fibres indicate at once the functions they have to perform; under the muscular coat is a quantity of cellular tissue, called the nervous, submucous, vascular or cellular coat. It is upon this coat that the mucous membrane of the stomach rests, and in which the blood-vessels are distributed, before they pass to supply mucous coat. All these membranes are found to a greater or less extent in the whole of the alimentary canal.

The most important of the coats of the stomach is the internal, or mucous. It is constructed in the same way as the whole of the mucous membranes, which every where form the interior of the passages leading into or from the internal organs. This membrane consists of two parts: of an under layer, called *corium*, which rests always on the submucous cellular tissue, and is composed of a layer of fibres and vessels, varying much in thickness in different parts, which is covered over with a very thin lamella, called *basement membrane*. On this membrane are formed the cells which are called *epithelium*. These cells vary much in size, shape, and number, according to the part of the mucous membrane on which they are found. The external surface of all mucous membranes is kept moist with a secretion called *mucus*. It is this substance which collects in the mucous membranes of the nose, and the necessary removal of which, when it accumulates, has led to the use of the pocket-handkerchief amongst civilized nations. The same secretion frequently collects in the pharynx and windpipe, and is removed by the process of expectoration. In diseases of the mucous membranes, this secretion may be either entirely arrested, or increased to an unnatural extent. In inflammation of these membranes, the secretion in the first stages is often entirely suppressed, and subsequently greatly increased. This is not unfrequently the case in common cold. The secretion also changes its character in different diseases, and at different stages of the same disease. Thus, in a common

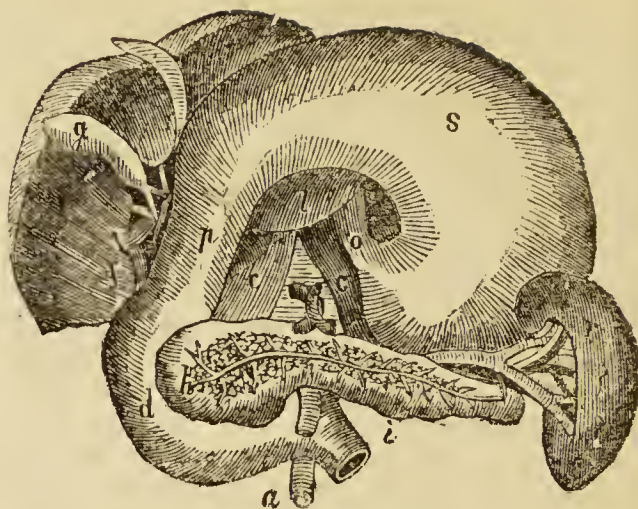
catarrh, which is an inflammation of the membrane of the nose, it is at first thin and watery, but subsequently becomes thick and tenacious. This mucus is composed of water, holding various substances, such as common salt, (chloride of sodium,) and other salts of potash and soda in solution. Diffused through it are cells and corpuscles, which have been thrown off from the basement membrane.

In addition to these general characters, the mucous membranes frequently present depressions and elevations of various kinds. The depressions, according to their nature, are called follicles or glands, whilst the elevations are called papillæ and villi. The depressions or follicles are types of the whole of the glands of the body, which seem to be but continuations of the mucous membrane, however various the products of their secreting powers.

The mucous membrane of the stomach has certain peculiarities. It is generally of a palish pink hue, arising from the blood-vessels beneath it. This colour is more intense during the process of digestion, as at that time the quantity of blood sent to the stomach is greater than at any other. This is in accordance with a very general law of the economy, that wherever an organ is actively exercising its functions, the greatest quantity of blood will be sent to it.

The mucous membrane of the stomach is only loosely attached to the muscular membrane below it; so that whenever the latter contracts, the mucous membrane is thrown into folds. These are called *rugæ*, and are very characteristic of the stomach when it is empty. They, however, disappear, and the inside of the stomach is quite smooth, when it is distended. The mucous membrane of the stomach is studded with the depressions and elevations to which we have alluded. It seems to be more especially the function of the depressions to secrete special products; and the depressed portions of the mucous membrane in the stomach—forming little tubes which are aggregated together in masses—seem to secrete the gastric acid of the stomach, through whose agency digestion is carried on.

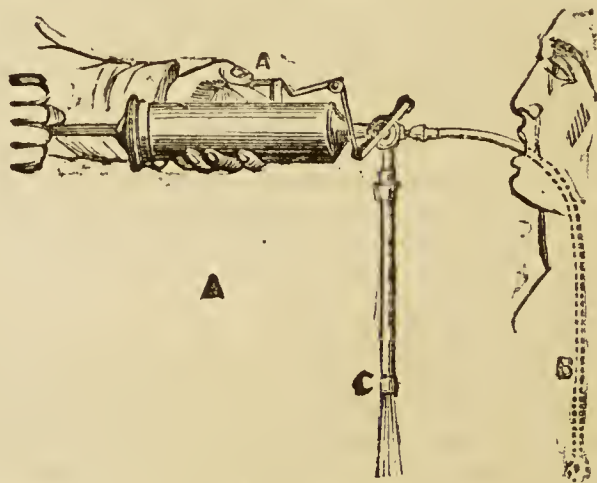
[The above cut represents the various parts and organs situated in the region of the stomach—*l* the under-surface of the liver; *g* the gall-bladder; *f* the common bile duct; *o* the cardiac end of the stomach; *s* under-surface of the stomach; *p* pylorus; *d* duodenum; *h i* the pancreas, cut across to exhibit the structure of the pancreatic duct, and its branches; *r* the spleen; *c* portion of the diaphragm; *a* aorta.]



For further particulars of the Stomach and its diseases see *Abdomen, Alimentary Canal, Bile, Bowels, Digestion, Dyspepsia, Diarrhæa, Dysentery, Intestines, Worms, &c.*

STOMACACE (Greek *stoma* the mouth, *kakos* bad). Literally mouth disease, or *Canker* (which see).

STOMACH PUMP. This instrument is made on the principle of that employed for enemas; indeed, the latter may be adapted to the purpose of the former, by the mere addition of a long flexible tube or pipe, to go down the throat. We give a cut of one of



these instruments, exhibiting the latest improvements of construction: *A*, is the barrel, *B*, the pipe which is passed into the stomach, and *C*, that through which the liquid drawn from thence is discharged. In all cases of poisoning, the pump should be resorted to, if it is available, but as it requires some skill in the application, only a surgeon should attempt this; until his arrival, it is best to use Mustard, or Sulphate of Zinc emetics. (See *Poisons*.)

The above represents Maw's Improved Stomach Pump without valves, the stopcock worked by means of a flute key lever; it may be also fitted with tubes, and rendered available as an Enema and Ear Syringe.

STONE. A common name for calculus in the *Bladder* (which see), and *Gravel*.

STONE FRUIT. These are, generally speaking, somewhat indigestible when eaten raw, but to persons of good digestive powers are not so injurious as is commonly supposed. The annual attacks of bowel complaint, or English cholera, are commonly attributed to the plums which are plentiful at the season of the year when these come in; but in reality the fruit has very little to with them. The continuance of summer heat causes an accumulation of bile, and this, reaching its climax in the autumnal months, produces diarrhoea as a natural consequence. When, as is often the case, the fruit is eaten immoderately or in a bad condition, disorder of the bowels is likely to ensue, whether it be Stone Fruit or not. Still, we know that cherries and plums are not so wholesome as grapes and currants, and therefore weakly persons should partake of them only sparingly, if at all, and rather in a cooked than a raw state. See *Fruit*.

STONE POCK. This is a name applied to hard pimples. See *Skin Disease*, *Varus*.

STOOLS. One of the first inquiries of the medical man when called to a patient is respecting the character and frequency of the Stools, or evacuations of the bowels; these, therefore, should always be kept for his inspection, as by them he is enabled to form a pretty clear notion of the mode of treatment to be pursued. See *Fæces*.

STORAX. This is a kind of balsam, or concrete medicinal gum; it is the produce of the *Styrax Officinalis*, a small tree be-

resembles that of the balsams of Peru and Tolu; but it is far less frequently employed than those, although useful in chronic coughs and pulmonary affections.

The *Prepared Storax* is a spirituous extract of the gum; the dose is from 10 to 20 grains. There is a *Pil Styracis*, which contains one part in four of opium, and therefore should be cautiously administered.

STRAMONIUM, OR THORN APPLE. This is the *Datura Stramonium* of botanists, belonging to the natural order *Solanaceæ*; it is an acrid narcotic poison, and appears to exercise much the same influence on the human system as belladonna. It is sometimes given for the purpose of quieting the mind during violent paroxysms of insanity.



The claim which was some years since set up for it as a specific in severe chronic pains of the head and other parts of the body, may be well disputed, and its dangerous nature should prohibit its internal administration in any cases to which other remedies can be applied. When given, it should be in the form of Tincture or Extract, dose of the former from 10 to 20 minims twice a-day, in water; of the latter, from $\frac{1}{4}$ to $\frac{1}{2}$ a grain, which may be gradually increased to 4 grains in 24 hours.

Smoking the herb after the manner of tobacco, sometimes affords relief in spasmodic asthma; this has become a common practice of late, and with some persons it has proved very mischievous; it may be safely followed, although not to excess, by those with whom it produces no sensation of giddiness, or other bad head symptoms. The poorer Turks smoke this instead of opium, and the Ceylonese, when asthmatic, have done so time out of mind



longing to the natural order *Styraceæ*. Being an aromatic expectorant, its action

STREMA (Greek *strepheo* to turn) The sudden wrenching or turning of a joint, commonly called a *Sprain* or *Strain* (which see).

STRIA (Latin for a *streak* or *groove*). Hence the term *corpora striata*, two streaky eminences in the lateral ventricle of the brain.

STRICTURE (Latin *stringo*, to bind). A contracted state of some part of a tube or duct. It also denotes in strangulated hernia the narrowest part of the aperture through which the viscera protrudes. The parts in which Stricture most commonly occurs are 1st, the Oesophagus, which is rare, and quite beyond the reach of domestic treatment; 2nd, the Rectum, this being a mechanical closing of the bowel, caused either by chronic inflammation or malignant disease; in this the fœces are passed with much difficulty, being sometimes no larger than a tobacco pipe in diameter; here, again, domestic treatment is of little or no avail; 3rd, the Urethra, the passage of which must be gradually enlarged by the introduction of a succession of instruments called *Bougies* and *Catheters* (which see). This kind of Stricture is, generally, the result of excesses in early life; it sometimes amounts to complete stoppage of the urine, and causes very great suffering; when immediate relief cannot be obtained by the use of the above named instruments, a partial measure of it may, by warm moist application to the parts, or a resort to the hip-bath. See *Bladder, Strangury*.

STRIDOR DENTII, Grinding or Gnashing of the Teeth; sometimes called *Brygmus*. This is symptomatic chiefly of brain affections in children, and should always lead to anxious enquiry; it sometimes indicates intestinal derangements, and especially those caused by *Worms* (which see).

STRIGIL, or **STRIGILUS**. The name given to a scraper, or flesh-brush, used for purposes of friction, and to remove dirt and perspiration from the body when bathing.

STRONTIUM. A metal so named because first discovered at Strontian, in Scotland. It is the base of *Strontia*, which, on account of its burning with a crimson flame, is much used in the manufacture of fireworks.

STROPHULUS. The name of a genus of cutaneous diseases, comprising several papular affections peculiar to infants, such as Red Gum, or Tooth-rash. They consist of pimples on the face, neck, arms, and loins, generally in clusters, surrounded by a reddish halo. Wilson and Bateman distinguish the following species:—*S. intertinctus* Red Gum, or Gown; *S. albidus*, White Gum; *S. confertus*, Rank Red Gum; *S. volanticus*,

Wildfire Rash; *S. candidus*, Pallid Gum Rash. See *Skin Diseases*.

STRUMA (Latin *struo*, to heap up). This is another name for scrofula, or *King's Evil* (which see).

STRYCHNIN. The alkaloid discovered by Pelletier in the fruit of the *Strychnos Nux Vomica*, and other plants of the same genus. This substance is one of the most powerful excitants of the spinal system of nerves known; when given in an overdose it causes convulsions and tetanic spasms. It is sometimes administered in obstinate cases of paralysis, in doses of from $\frac{1}{20}$ to $\frac{1}{12}$ of a grain, carefully watching its effects. This should on no account find a place in the family medicine chest; it is far too dangerous for domestic administration; 16 grains mixed with an ounce of lard may with advantage be rubbed into paralysed parts. See *Nux Vomica*.

STUPA, or **STUPPA** (Greek for *Tow*, which see).

STUPOR (Latin *stupeo* to be senseless), Insensibility; hence the terms *Stupor dentium*, applied to what is generally called *Teeth on edge*; and *Stupefacients*, to medicines which produce stupor, properly *Narcotics* (which see).

STYE (Saxon *stithan*, a springing up). This well-known inflammatory tumour in the eye-lid, is often very troublesome; delicate and unhealthy children are much subject to the affection, but sometimes adults, and even those in robust health, are liable to it. At first there is a little irritation and itching in the upper or lower lid of the eye, but more frequently in the former; then there is redness and swelling, and a small boil is developed among the roots of the eyelashes; after two or three days this bursts, and matter escapes; a scab forms, which soon drops off, and probably in a few days there is no symptom remaining to mark the spot.

Treatment. Commence by fomenting the eyelids, night and morning, with warm water, or decoction of poppies, and keep on during the night a warm bread poultice; continue with this until the matter is formed and discharged; then, when the scab is formed, smear the margin of the lids night and morning, with a little dilute Citron ointment, taking care that it does not go into the eye; this may be continued for a week or so, giving at the same time 2 grains of Grey Powder, with about 5 grains of Rhubarb, every other night. Persons who are subject to Styes, should bathe their eyelids with a weak solution of salt in water every night and morning.

STYLOID (Greek *stylos*, a pillar or pencil, and *eidos*, likeness). This is a name given to a pencil-like process of the temporal bones. From this root we have the surgical terms—*Stylo glossus*, *S. hyoideus*, and *S. pharyngeus*, three muscles arising from the styloid process, the first of which moves the tongue laterally and backwards; the second raises the os hyoideus; and the third raises the pharynx, and draws up the thyroid cartilage. *S. mastoid* is the name of a foramen situated between the styloid and mastoid processes, through which the portio dura of the seventh pair of nerves passes; also, of an artery which enters the foramen. *S. maxillary*, the name of a ligament which extends from the styloid process to the angle of the jaw.

STYPTIC (Greek *stypē*, tow, whence comes our Latin *stipo*, English *stop*). Originally no doubt applied to any vegetable fibre like tow, which might be used for stopping or compressing the apertures of wounds, and so prevent the bleeding: applied now to all astringent applications which have the effect of arresting hæmorrhage, such as a saturated solution of Alum, Sulphate of Iron or Zinc, Cobweb, Creosote, Tincture of Benzoin, and Dutch Drops. Pounded Ice, and other extremely cold applications, although they do not act exactly in the same way, are also good Styptics. The term is sometimes applied to any medicines which have an astringent quality. See *Astringents*.

ST. ANTONY'S FIRE. This is a diffused inflammation of the skin, with a tendency to spread, and sometimes extending to the cellular tissue. It is the same as *Erysipelas*, (which see).

ST. JOHN LONG'S LINIMENT. According to the system of St. John Long, all diseases were to be cured by friction and dietetic measures. The Liniment which he introduced, and with which, according to popular belief, he effected his pretended cures, is as follows:—Take of Spirits of Turpentine 3½ ounces, the yolk of an egg, strong Acetic Acid 6 drachms, Oil of Lemon 10 minims. Rub the Turpentine with the yolk of an egg, then add the other ingredients; shake well up, and set it by for use. When wanted again, shake the bottle, and pour a table-spoonful into a saucer; soak it up with a sponge about the size of a small apple, which has been previously dipped in hot water, and squeezed dry. With this dap the nape of the neck diligently, for five minutes or so. When the skin gets irritated and sore, apply the *liniment* between the shoulders, and continue to do this about every week.

ST. VITUS'S DANCE. This distressing

malady is characterised by grotesque jerks of the body, &c., resulting from the futile efforts of the will to restrain the involuntary muscles; in the convulsions the flexor and extensor muscles internally are alternately in strong action, whilst in tetanus and hydrophobia, the flexor only are exercised.

SUB. The Latin preposition denoting under, hence the terms *Sub clavian* and *S. clavus*, the 1st. an artery situated under the clavicle, and the 2nd. a muscle which brings the clavicle and shoulder forwards and backwards. *S. cutaneus*, beneath the skin, a name of the *Platysma Myoides*, a muscle which draws the skin of the cheek downwards, and when the mouth is shut, brings the skin of the lower jaw upwards. *S. diaphragmatica*, a plexus of nerves furnished by the solar plexus, and distributed to the diaphragm. *S. lingual*, the name of a gland situated under the fore part of the tongue: also, of a branch of the lingual artery. *S. mastoid*, a branch given off by the seventh pair of nerves, as it passes out of the stylo-mastoid foramen. *S. maxillary*, a gland situated on the inner side of the ramus of the lower jaw, and of a ganglion which occurs on a level with this gland. *S. mental*, an artery and veins running beneath the skin. *S. scapularis*, a muscle arising from the inner surface of the scapula which pulls the arm backwards and downwards. *S. sternal*, the name of the lymphatic beneath the sternum. *S. sultus*, twitching, sudden and irregular snatches of the tendons. In chemistry, also we have such terms as *Sub resin* and *Sub salts*, the first being that portion of a resin which is soluble only in boiling alcohol, and is thrown down again as the alcohol cools; and the last, originally, any salt which contains an excess of base, as sub-carbonate of soda. Also *Sub-tepidus*, as applied to the temperature of a bath—lukewarm.

SUBLIMATION. The process by which volatile substances are raised by heat, and again condensed into a solid form; it is, in fact, dry distillation. The substances so obtained are called *Sublimates*; one of the commonest examples of these is the *Sulphur Sublimatum*, commonly called Flour of Brimstone.

SUBER. The scientific name of the cork tree, or *Quercus Suber*, of the natural order *Cupuliferae*, of whose bark, the sub-epidermal tissue, and not the bark itself, as most persons suppose, is the cork of commerce, so useful for stopping phials and other purposes. Among the components of cork, the most important is a peculiar sub-

stance, called *Suberin*, a light, soft, spongy insoluble vegetable principle, which, on



combination with Nitric Acid, forms *Suberic Acid*.

SUBSTANTIVE. A term applied by Dr. Paris to those medicinal agents which possess an inherent and independent activity. Those which are in themselves inert, but are capable of imparting impulse, and increased energy to the former, have been called *adjective constituents*.

SUBUBERES (Latin for under the breasts). A term applied to children during the period of suckling; when weaned, they are called *Exuberens*.

SUCCEDANEUM (Latin *succedo*, to follow). A medicine substituted for another. From the same root we have *Succentariatus*, the former name of the pyramidal muscles of the abdomen, and of the renal capsules.

SUCCINUM (Latin for *Amber*, which see).

SUCCUS (Latin for juice; the expressed liquor of a fruit or plant: *Succus spissatus* is inspissated juice, or that which is thickened by heat.

SUCCUSSIO. A mode of exploring the chest by forcibly shaking the patient's body, and noticing the sounds which are thereby produced; in some suspected visceral affections this may be serviceable, but since improved modes of auscultation have been introduced it has seldom been practised. See *Auscultation*.

SUCTION (Latin *sugo*, to suck). By the act of suckling the pressure of the atmosphere is removed from the papilla, and the milk is consequently ejected by this pressure acting upon the *breast*, by a reference to our article on which it will be seen how artificial pressure is sometimes employed to

relieve the mammae of an accumulation of lacteal fluid. Suction by the mouth is also sometimes resorted to in cases of bites by venomous creatures; if there is no abrasion of the skin of the lips of the sucker, and the venom be immediately spat out, and the mouth washed, this attempt to save the life of a fellow-creature may be safely made.

SUDOR (Latin *sudo*, to sweat). *Perspiration* (which see). Hence we have the terms *Sudor Anglicus*, the Sweating Fever, a contagious pestilential fever which appeared in England in the 15th and 16th centuries; *Sudorifics*, medicines which occasion sweating (see *Diaphoretics*); *Sudamina*, vesicles resembling millet seeds, which appear in puerperal fever, typhus, &c. (see *Malaria*); *Sudatorium*, a name given to an air bath raised to a temperature of 85°, by which profuse perspiration is produced. See *Bath*.

SUFFITUS (Latin *suffio*, to fumigate). Fumes of burning substances used for *Fumigations* and *Inhalations* (which see).

SUFFOCATION. This is the act of choking or stifling; a stopping of respiration either by intercepting the passage of air to and from the lungs, or by inhaling smoke, dust, or air that is not respirable. Thus, death by hanging, drowning, stifling by carbonic acid gas or other mephitic vapours, are each and all Suffocation; although the term is sometimes considered to signify only death by agents which do not compress the windpipe, as in the first case (or, as we term it, *Strangulation*), but, by stopping the supply of oxygen to the lungs, render it unfit for circulation, and poisonous to the system. Suffocation often arises from very trivial causes; too many clothes over the mouth of an infant will produce it; swallowing a piece of food too large for the passage; even a small piece of potato-skin over the opening of the larynx, so as to stop the passage of air, has done this; so has a pin and a cherry-stone accidentally drawn into the air passages, and husks of wheat drawn into the windpipe, as was the case with a young man whose head was thrust into a sack of bran. Infants have often been suffocated by being overlaid by heavy sleeping nurses or mothers, and they are always in danger of being so, when left with a bag of wash-leather, or piece of rag filled with sugar, or a raisin, to suck, and be kept quiet. People have lain down by lime-kilns and charcoal fires, and met their death by *Asphyxia*, which is but another name for Suffocation. See the heads *Carbonic Acid*, *Choke Damp*, *Foul Air*, &c.

SUFFUSION (Latin *suffundo*, to pour down). A term applied by Celsus to denote

generally imperfection, or loss of sight, whether arising from cataract or from affection of the nervous structure. In the latter case it was sometimes called *Suffusio nigra*, or *Cataracta nigra*. The ancients supposed that opacity was caused by something running under the crystalline humour; hence the application of this term.

SUGAR (Latin *saccharum*). This is one of the most generally used and agreeable articles of diet of which man partakes. Like starch, however, it is not nutritious, but is taken into the system with the object of maintaining animal heat. Persons may even get fat upon sugar, but the living tissues, as we have explained when speaking of starch, are not nourished by any of the carbonaceous productions of plants. It is true, that in countries where the sugar cane is grown, slaves and their children, during the period of its gathering, partake of it in large quantities, and are nourished upon it; but the sap of the sugar cane, and the cane itself, contain other alimentary principles besides sugar, which assist in the nutrition of the body.

Sugar, being readily soluble in water, is more digestible than starch. Of the substances which maintain animal heat, it is the most easily digested: and hence we may see a reason why it is supplied to the young of the higher forms of animals. For this purpose, it is secreted, by the female of all the mammalia, in the milk, which is furnished universally to their young during the first months of their existence. The instinctive love of sugar, so well known as a distinguishing character of the child, seems to point out its adaptation to the wants of the infant system. Readily digestible, however, as sugar is, it is one of those substances which speedily undergoes decomposition. The changes it undergoes in *fermentation* we shall again have to refer to; but when taken into the stomach and the system, its elements seem to enter into secondary combinations, which are very injurious. This is why so many persons find it necessary to limit the quantity of sugar which they take in their diet. The changes, however, which it so frequently undergoes in the adult system do not appear to take place in children; hence the child may eat sugar with impunity, although its parents may not. The practice of inducing children to give up sugar in their tea and other food is to be condemned, on the ground that sugar is evidently intended by nature to supply them especially with the materials for maintaining animal heat. It is very unreasonable, and sometimes a dangerous

practice, for fathers and mothers to argue that what is good for them as diet must be for children—or that what is injurious for them is also for their children.

Although there are various kinds of sugar, having a different composition, they seem all to act dietetically in the same way upon the system. The most common form of sugar in plants, and that which is most frequently eaten in diet, is cane sugar, so called from its being yielded by the sugar-cane. It consists of—Carbon 12 atoms; Hydrogen, 9 atoms; Oxygen, 9 atoms; Water, 2 atoms.

The other kinds of sugar which are eaten, are milk sugar $C_{24} H_{19} O_{19} + 5HO$; grape sugar $C_{12} H_{12} O_{12} + 2HO$. It will be seen that cane sugar resembles starch in its composition, and it is probably formed in the plant from that body. Although cane sugar is found in the sugar cane, the beet, and the maple, it is not so frequent in plants as grape sugar, which is the form in which sugar is found in the fruits and other parts of plants, which may be sweet.

Besides the sugar-cane, many other species of plants belonging to the family *Gramineae*, or Grasses, contain sugar; such as *Maize* (which see), and the stalks of *Barley*, *Oats*, *Rice*, *Wheat*, &c., all of which yield a sap holding sugar in solution. Most of the fruits of plants also which are eaten by man contain it; and although in many instances they possess other dietetic principles, yet in such cases as the fig, the date, raisins, and prunes, this is the distinguishing ingredient.

It is found that whatever kind of sugar is used for this purpose, that it is first changed into grape sugar. So that if we take two atoms of grape sugar, $C_{24} H_{28} O_{28}$, and expose it to the process of fermentation, it will be changed into

	C.	O.	H.
4 atoms of alcohol.....	16	8	24
8 atoms of carbonic acid	8	16	0
4 atoms of water	0	4	4

Grape sugar 24 23 28

The various beverages thus formed are known by the names of *Wines*, *Spirits*, and *Beers*.

Sugar undergoes chemical changes with great facility, and one of these has caused it to be used very extensively in a class of compounds called fermented beverages. When sugar in solution at a high temperature is exposed to the action of various substances in a state of decomposition, it becomes changed. The elements, carbon, hydrogen, and oxygen, of which it is com-

posed, change their relations one to the other, and a substance called *alcohol* is produced. The composition of alcohol is—Carbon, 4 atoms; oxygen, 2 atoms; hydrogen, 6 atoms.

Sugar is a powerful antiseptic; in medical practice it is chiefly used to cover the nauseous taste of drugs; it is the substance of which all medicated syrups are made, and it is used in the formation of pills; it is found in the urine in the disease called *Diabetes* (which see); and modern chemical inquiry has shown that it is formed naturally in the liver; probably it also exists in the blood and most of the other fluids of the system. See *Sweets, Syrup, &c.*

SUGELLATION (*Sugello*, to discolour the skin by a blow). Extravasated blood, the result of a bruise or blow. See *Ecchymosis*.

SUICIDE (Latin *suicidium* from *se*, and *cædo* to slay), self-slaughter. In the eye of the law a *felo de se* is a person who, being of the years of discretion, and in his senses, destroys himself. In opposition to the hitherto prevalent opinion, that the cause of self-destruction is, in the majority of cases, a mental act, unconnected with a disturbed condition of the bodily functions, and incurable by any process of medical treatment, Dr. Forbes Winslow asserts his belief that the suicidal idea is *almost generally* connected with a morbid condition of the body, and is often the only existing evidence of such an affection: that it is, with a few exceptions, universally associated with physical disorder, disturbing the healthy balance of the understanding; and that this bodily affection, which is, in nine cases out of ten, the cause of mental irregularity, is easily curable by the judicious application of remedial means.

The argument to be adduced from this well grounded belief is, that persons who manifest suicidal tendencies should be looked upon not as hopelessly insane, but as diseased persons, whose malady is quite within the reach of proper remedies; this is a more cheering view of the subject, both to those so affected, and to their friends and the public, than that too commonly entertained, that one into whose mind the idea of committing suicide has entered, is in a hopeless, helpless condition, requiring only restraint to prevent his fulfilling his unholy design. (See *Hereditary Tendencies*.)

SULCUS. A groove or furrow, generally applied to bones.

SULPHATE. A combination of Sulphuric Acid with a base, which may be either an alkali, or a metallic oxide. The Sulphates

employed medicinally are pretty numerous: thus we have those of Ammonia, Baryta, Copper, Iron, Magnesia, Potash, Soda, Zinc, &c., a description of which will be found under those several heads. A *Sulphuret* is a compound of Sulphur with an electropositive or inflammable body, as the Sulphuret of Potassium; the principal ores of Iron, Copper, Lead, &c., are the *Sulphates* of these metals; *Sulphorinic Acid* is the name given by Vogel to an acid or class of acids, which may be obtained by digesting Alcohol and Sulphuric Acid together by heat; probably this is merely a hypo-sulphate with some oily matter; *Sulphic Salts* are double Sulphurets, in the constitution of which may be traced a close analogy to Salts.

SULPHUR, or Brimstone. This useful mineral, which, in one form or another, enters so largely into our medical formulary, is one of the most abundant constituents of the globe, being a constant element in most animal as well as vegetable substances, and existing in the form of metallic sulphurets, and in the combination of Sulphuric Acid with various bases, such as lime, magnesia, &c., almost everywhere. Our readers must be sufficiently familiar with the appearance of this substance in its unmixed states. "The Roll Sulphur" is merely the mineral fused and cast into moulds; in "the Flowers of Sulphur," we have it as vaporized by heat and then condensed—this we call *Sulphur Sublimatum*; in "the Milk of Sulphur," so called from its whiteness, it is levigated and washed: this is the *Lac Sulphuris* of the Pharmacopœia, and is the best form for internal administration, being the most pure, and free from that strong odour which renders the use of Brimstone so objectionable. That much of it when taken passes off by the skin in what is called insensible perspiration, we know by the blackening of a silver watch or coins, which a person taking it may have about him.

Sulphur acts upon the system as a laxative, and is commonly given as a purifier of the blood to children and scrofulous persons: combined with Cream of Tartar, and other mild purgatives, it is a good medicine for *Piles* (which see): as a deobstruent in affections of the liver, it is given in small doses with good effect; it also acts as a diaphoretic and alterative, and is very useful in skin diseases, especially Itch, on which, applied externally, it acts as a specific. (See that head.)

By adding an acid to one of the alkaline sulphurets, we obtain Sulphureted Hydrogen Gas, which may be diffused through

water, and so taken with advantage in uterine and liver affections, and skin diseases, for which a bath so prepared is generally efficacious: commonly, however, the Sulphur bath is made by adding the Flower, or Milk of Sulphur, to boiling water, and using it when sufficiently cool: this is a more cleanly way of treating Itch than smearing the body over with Sulphur Ointment, as is generally done.

Sulphur, as an alterative, should be given in doses of from 5 to 20 grains three times a day; as a purgative from 1 to 3 drachms. Of either of the Alkaline Sulphurets the dose is from 2 to 10 grains. The Milk of Sulphur is best given in milk, and acts all the better mixed with an equal weight of Magnesia; of this combination about a drachm is the maximum dose. The Sulphuret of Mercury with Sulphur, prepared by rubbing together equal quantities of Quicksilver and Brimstone, was at one time a favourite medicine, much given as an anti-venereal, alterative, and anthelmintic, under the name of Æthiop's Mineral; it is a most disagreeable form of preparation, being perfectly black, and is now nearly superseded by more active and agreeable forms; it is, however, useful, especially in scrofulous glandular swellings; the dose is from 5 to 30 grains; Treacle is the best vehicle of administration.

Sulphuret of Carbon, or *Carburet of Sulphur*, as it is sometimes called, is a light, volatile fluid, very inflammable, and having a penetrating odour. It is a diffusible stimulant, diaphoretic, and emmenagogue, in doses of from 2 to 5 drops; in large doses it is a dangerous narcotic; it has been chiefly given as a sudorific in rheumatism, and applied externally as an embrocation to rheumatic joints, and to the abdomen for the after-pains of labour; when inhaled it is an anæsthetic.

Iodide of Sulphur has of late been much used as an outward application in cutaneous affections, and also given internally in the same; dose from $1\frac{1}{2}$ to 2 grains; Dr. Copeland recommends its inhalation in humoral asthma; and Dr. Hooper has employed it as a fumigation in skin diseases; his direction is—Mix $1\frac{1}{2}$ ounces of Sulphur and 1 drachm of Iodine together, and use one-twelfth part at the time. Escobar recommends it for incontinence of urine, mixing 10 grains with $\frac{1}{2}$ a drachm of Gum Arabic Powder, and taking a sixth part night and morning. The strength of the Ointment for outward application is from 20 to 30 grains to 1 ounce of lard.

SULPHURIC ACID. See *Acids*.

SUPER (Latin preposition, above). Hence the terms *Super-cilium*, the ridge of hair above the eyelid, commonly called the eyebrow; *S. foetation*, literally the impregnation of a person already pregnant, a term formerly applied to a case in which a dead and apparently premature foetus was brought forth with a living one. There can be little doubt, however, that the conception of the two must have been coincident.

SUPINATION (Latin *supinus*, lying with the face upwards). This is the act of turning the palm of the hand upward, by rotating the radius upon the ulna. The opposite action is called *Pronation*. The muscle which turns the palm of the hand upward is called the *Supinator*.

SUPPOSITORY (Latin *supposito*, to put under). A medicated solid of a conical or oblong shape introduced into the rectum. The object is to allay pain or irritation; hence the Suppository is generally of a sedative nature, and is often composed chiefly or wholly of opium, made up like a large pill or bolus.

SUPPURATIVES (Latin *sub* beneath, and *pus* matter). Applications which promote the formation of matter by inducing what is called *phlegmonous* inflammation, differing in this respect from rubefacients and vesicants, or blisters which produce *erythematous* inflammation. We apply Suppuratives to abscesses, boils, &c., to hasten their ripening, as it is called. Among those most commonly used we may mention warm linseed poultices, and hot fomentations. The process by which *pus* is formed, or deposited on the surface, or in the substance of any tissue, is termed *Suppuration*.

SUPRA (Latin preposition, above). Hence the terms *Supra-orbital*, an artery sent off by the ophthalmic along the superior wall of the orbit, and passing through the Supra-orbital foramen; *S. renal*, the name of two capsules situated above the kidneys; *S. spinatus*, a muscle arising from above the spine of the scapula, and inserted into the humerus; it raises the arm.

SURDITUS (Latin *surdus*, deaf). *Deafness* (which see), and *Hearing*.

SURGERY, or as it was anciently called, *Chirurgery* (Greek *cheir* the hand, and *ergon* work). That branch of medicine which treats diseases by the application of the hand alone, the employment of instruments, or the use of topical remedies. The surgeons of but a few centuries ago were a rude, illiterate set of men, their calling being associated with that of the barber. It was to the barber surgeons that Edward IV. granted a charter of incorporation, and from thence

arose the present College of Surgeons, whose members are, generally speaking, men of education and ability. The right to put M.R.C.S. after their names is a proof that they have passed an examination in the different branches of Surgery, and have obtained a legal right to practice as surgeons throughout Great Britain and the colonies. See *Apothecary, Medicine, Practice, Physician, &c.*

SUSPENDED ANIMATION. This is a term employed to designate the state of children still-born, and the effect of inhaling carbonic acid and other deleterious gases, by strangulation and by submersion: the respiration being interrupted, the blood cannot receive its due supply of oxygen, and is therefore unfit for the purposes of life; the patient is, as it has been generally and forcibly expressed, "poisoned by his own blood."

We have already, under the head of *Drowning, Carbonic Gas, Infants*, alluded to the methods of effecting a restoration to life in these cases; but the subject is so important that we deem it our duty to give here a fuller explanation of the *modus operandi*: we cannot do better than give it in the words of Dr. Marshall Hall, who, in his edition of "Underwood on the Diseases of Children," says:—

"The first object is to excite respiration, and the means of doing so are these:

"The *fifth* pair of nerves should be excited by forcibly dashing very small quantities of cold water on the face, or by stimulating the nostrils by ammonia, snuff, pepper, or the point of a needle.

"The *spinal* nerves should be excited by forcibly dashing cold water on the thorax, and on the thighs, or by tickling, or stimulating the sides, the buttocks, the arms, the soles of the feet, &c.

"If these attempts to excite respiration fail, inspiration is to be imitated by artificially distending the lungs.

"To effect this, the practitioner's lips are to be applied to those of the infant, or adult, closing the nostrils of the patient, and gently pressing the trachea upon the oesophagus. The chest is then to be pressed, to induce a full expiration, and allowed to expand, so as, if possible, to effect a degree of inspiration.

"But it is important, in doing this, that the practitioner himself should previously make several deep and rapid inspirations, and finally a full inspiration. In this manner the air expelled from his lungs into those of the patient will contain more oxygen and less carbonic acid, and conse-

quently be more capable of exciting the dying embers of life.

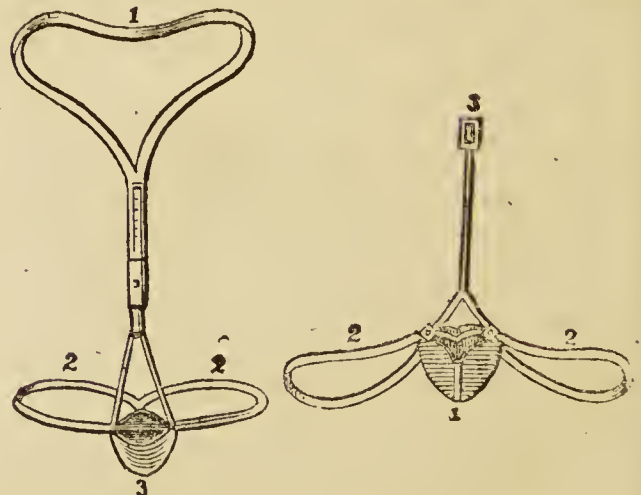
"In the midst of these efforts it should in the next place, be the office of two other individuals to maintain or restore the temperature of the patient, by gently, but constantly, pressing and rubbing the limbs between their warm hands, passing them upwards in the direction of the venous circulation.

"When respiration is established, the face must still be freely exposed to the air, whilst the temperature of the limbs and body are carefully sustained.

"As soon as possible, a little warm liquid, as barley water, at blood heat, should be given; in the case of infants, by means of the proper bottle, furnished with leather or soft parchment. A teaspoon must not be used, for fear of choking. If the infant draws the liquid through its own lips by its own efforts, there is no danger.

"Lastly. If all these remedies be tried in vain, galvanic or electric shocks should be passed from the side of the neck to the pit of the stomach, or, in the course of any of the *respiratory* nerves, and their appropriate muscles. No time should be lost in sending for a proper apparatus; but, should the lapse of an hour, or even more, take place, before it can be obtained, still it should be sent for and tried." See *Asphyxia, Drowning, Still-born, &c.*

SUSPENSORY (Latin *suspendo*, to suspend). A bandage for supporting the scrotum; this is simply a netted or woven bag, made of some soft material, with a couple of strings to lie over the tops of the hips for support; there are several more elaborate and more serviceable contrivances; among them may be named "Huxley's Scrotal Suspenders," and Bourgeaud's



Suspensory Bandage, of both of which we give cuts. In the first we have simply a band of elastic material passing round the

neck (2 2) and sustaining the chief weight, while other bands pass from the back part of the bag (3) and round the upper part of the thigh, and fasten in front; every part of the material is very elastic, so that it furnishes support without being felt as an inconvenience. In the second, the bag, supporting the scrotum (1) is made of a delicate webbing of silk and India-rubber; the bands running round the thighs consist of the most yielding elastic tissue; a third band (3) is adapted to the upper part of the bag, and is intended to be fastened to the flannel waistcoat of the patient. The scrotum is thus kept raised and fixed in *situ* without distressing the organ, the suspensors allowing of the most varied movements of the body. For more particulars on this head see *Trusses*.

SURSURREUS. An acute cutaneous hissing or whizzing sound, or sharp kind of whispers caused often by some obstruction of the bronchial passages.

SUTURE (Latin *suo*, to sew). A mode of uniting the edges of a wound by stitches. Surgeons distinguish four different kinds, viz., the Interrupted and Uninterrupted, the Twisted and the False, or Dry Suture; it would be useless to describe these, as only one practised in the art of healing, could enter into their peculiarities. It is sometimes advisable in the absence of professional aid, for the edges of a bad wound to be drawn together, and this may be effected by a tolerably stout needle, threaded with a piece of strong silk; the stitches should be set some way in from the edges of the cut, and should not be placed very near together. See *Cuts, Wounds*.

Suture is a term also applied to the junction of the bones of the cranium by a serrated line, resembling the stitches of a seam. There are four Sutures in the cranium, called the Cranial, the Sagittal, the Lamboidal, and the Squamous. See *Skull*.

SWALLOWING. The act by which anything is conveyed from the mouth, through the gullet or œsophagus, into the stomach; it may be said to consist of three stages, the first being that by which the substance is passed into the pharynx, this is purely voluntary; the second is not so, but is an act of the reflex function, which may be easily excited by artificial means; the third is altogether involuntary, being due to the irritability of the œsophagus, which by a series of muscular contractions and expansions forces the substance downward. See *Gullet, Esophagus*.

SWEAT. This is a vulgar name for the watery vapour which perspires from the

body through the pores of the skin. See *Perspiration*.

SWEETS—SWEETMEATS. Toffy, Rock, and other articles of confectionery, are not necessarily unwholesome; if made of sugar, unmixed with any deleterious substances to colour or flavour them, they may safely be eaten, if not too frequently, or in too large quantities, so as to cloy the appetite to the rejection of more nutritious food; but, unfortunately, we cannot depend upon the purity and innocence of the ingredients employed in the wholesale manufactory of Sweets, whose consumption has of late so largely increased among the juveniles of this country. The investigations of the "Lancet Sanatory Commission" have proved that poisonous substances are employed to a considerable extent to give colour and flavour to sugar confectionery: Arsenite of Copper, Verdigris, and a mixture of Chrome and Prussian Blue, has been found in the greens; Chromate of Lead in the yellows; Vermilion and Oxide of Iron in the reds; the Carbonates of Lead and Zinc, Chalk, and the Sulphate of Baryta in the whites: which almost invariably contains a considerable proportion of Gypsum or Plaster of Paris, which, although not so decidedly poisonous as some of the above articles, is certainly deleterious; of this substance carraway comfits and the frosting of cakes, are in part composed, and the cheap peppermint and other lozenges sold in market places and country shops, are sometimes adulterated with it to the extent of one-third of their whole substance, as was proved in the investigation which took place at Bradford, in 1858, in consequence of the poisoning of a number of persons by some lozenges, into which Arsenic had been put instead of Plaster of Paris, or "Daff," as it is technically called: the mistake having been made by the apprentice of the druggist who supplied the lozenge maker. The figures and other ornaments on Twelfthnight, and other cakes, should never be given to children to eat, as they are made up, to a great extent, of gypsum, and if coloured, should be viewed with increased suspicion. The oil of Bitter Almonds, Peach Kernels, and Laurel flavouring largely employed in confectionery, are decidedly poisonous, although not so much so, perhaps, as the minerals above mentioned; the Jargonelle Pear flavour, which has of late obtained much favour, is made from the fusil oil, obtained in the process of distilling spirit from grain and potatoes; it has been known to produce dangerous head symptoms in children. The sugar confectionery which is safest to take, is that

which is transparent, uncoloured, and unflavoured, unless it be with Cinnamon, Cloves, or some other aromatic oil which is not likely to have undergone sophistication.

SWEET SPITTLE. An increased secretion of saliva, distinguished by a sweet or mawkish taste. See *Saliva*.

SWIETENIA MAHOGONI. This is the scientific name of the Honduras Mahogany tree, the bark of which is astringent and bitter, and has been found to resemble Peruvian Bark in its action on the human system. The *Soymda Febrifuga*, or East



Indian Mahogany, is also said to possess the same febrifuge properties; the dose of the Powder is about 30 grains: Dr. Ainslie found that when given beyond the extent of 4 or 5 drachms in 24 hours it produced vertigo and stupor.

SWINE-POCK or **POX**, is a variety of Chicken Pock (which see). It is distinguished by the conical form of its eruptions. See *Vareola*.

SYCOSIS (Greek *sykin*, a fig). An eruption of inflamed fleshy dark red tubercles in the hairy part of the face and scalp; they generally cluster together, and often several of them run into one; the discharge is sometimes acrid and offensive. The above name was given to this form of eruptive disease on account of the granulated and prominent surface of the ulceration, which has been thought to resemble the pulp of a fig. Bateman distinguishes two species: *S. menti*, Sycosis of the beard, sometimes called *Mentagra*; and *S. capillitii*, Sycosis of the scalp. See *Skin Diseases*.

SYMMETRY (Greek *syn*, together, and *metron*, a measure). The exact and harmonious proportions of the different parts of the body, so as to give not only grace and beauty to the whole form and movements,

but also strength, and, to a certain extent, health; this, in a perfect degree, deformed persons seldom enjoy, for where there is distortion and deformity in the frame there will generally be, from pressure, imperfect development, or other causes, a defective operation of some of the vital functions. The laws of Symmetry are perfectly consistent with those of health, and the pity is that they should be so little understood, or that fashion should be suffered to overrule both the one and the other. See *Dress, Education, Spine, Stays, Tight Lacing*.

SYMPATHY (Greek *pathos*, affection). In the treatment of diseases it is oftentimes very difficult to discover whether the train of symptoms, which we investigate for our guidance, are directly the result of certain organic or functional derangements, or of a reflex or Sympathetic action of one set of organs upon another, and were we not aware of the intimate connection, by nervous sympathy, which exists between all parts of the system, we should often be led far from the real seat of mischief, and into a very erroneous, perhaps mischievous, line of procedure. Not only in the regions of psychology then, are we to look for ever-living and acting Sympathy, but also in those of physiology; not only does mind sympathize with mind in a mysterious current of interchanging feelings and affections, but body sympathizes with body, and the different members and organs with each other; hence with disease of the liver we often have pain in the point of the shoulder; in that of the heart, the arm is frequently affected, and the urethra, in calculus of the bladder; when the stomach is disordered, we constantly find pain in the head; a contusion of the latter part will cause nausea and vomiting, and with disease of the brain, there is sometimes tingling in the extremities, the precursor of paralysis. All these are *nervous sensations*, the effect of Sympathy. Then again there are sympathetic *motions and actions*; stimulate the nostril and we sneeze; tickle the fauces and we vomit; such is the action of the reflex functions. If cold is applied to the skin, we have increased action of the kidneys, still sympathetic; and many other instances might be adduced in illustration of this influence, which often assumes the character of an imitative faculty, thus, if one person in a company yawns, the rest will feel a strong inclination to do so too.

The *Sympathetic Nerves* form a portion of the great nervous system, and have been so called from their intimate communication, by means of ganglia and filaments, with all

the other nerves of the body, among the chief viscera of which they are distributed. A *Sympathetic disease* is one which follows closely on another disease, of which it is supposed to be a consequence.

SYMPTOMS. Most diseases which affect the human system have their marked Symptoms, which to the experienced eye clearly indicate their nature and progress, and by means of them it is that the medical man is enabled to form his *Diagnosis* (which see). Not all, however, present these Symptoms in so clear and unmistakeable manner, that the mind can at once decide as to the precise nature of the malady under which the patient suffers. Some belong to a whole class of diseases, each of which requires some peculiarity of treatment distinct from the rest; some are common to diseases of a very opposite character; and it is only by very nice observation and weighing of one against the other, and of circumstances which modify them, that their indications can be correctly read. Symptoms, then, are so many outward and visible signs of inward disease. Some of them are so palpable that they cannot fail to be observed; others so slight and obscure that only by one taught to look for them are they likely to be noticed; but all are important links in a chain of evidence which the medical man carefully weighs, and convinced by which of the nature of the enemy he has to grapple with, he pursues the course of treatment which he feels to be right with boldness and decision. We can say nothing here of the Symptoms peculiar to individual diseases, as it would occupy too much space to do so; nor is it necessary, as they are mentioned under their several proper heads.

SYN is a Latin preposition, signifying *with or together*; for the sake of euphony, the final *n* has been changed into *m* before the labials *b, m, p, ph, ps, &c.*, into *s, l, r*, before these letters, and is entirely omitted when followed by two consonants: hence we have—

Sym-blepharin: a connection of the lid to the globe of the *Eye* (which see); *Sym-phisis*: the growing together or connection of bones which have no manifest motion, as the *Symphysis Pubis*: the operation of dividing this bone is called *Symphysiotomy*; (see also above *Sympathy* and *Symptom*).

In the following terms the prefix retains the terminal *n* unchanged:—*Syn-artrosis*, articulation of a joint without manifest motion; *Syn-chondrosis*, articulation by means of intervening cartilage; *Syn-chronosis*, that which occurs in equal times, as the stroke of a pulse; *Syn-chysis*, a con-

fusion in melting, applied to the confusion of the humours of the eye from blows, attended with rupture of internal membranes, capsules, or to the conversion of the vitreous humour into a fluid state; *Syn-clonus*, multiplied or compound agitation—a kind of spasm; *Syn-cope*, a sudden suspension of the heart's action, accompanied by cessation of the respiratory functions, internal and external sensation, and voluntary motion; *Syn-desmology*, a description of ligaments; *Syn-desmosis*, the connection of bones by ligaments; *Syn-echia*, an adhesion,—that of the uvea to the crystalline capsule is called *S. posterior*; that of the iris to the cornea, *S. anterior*: *Syn-izesis*, collapse of the pupil; *Syn-neurosis*, the connection of bones by tendon, formerly mistaken for nerve; *Syn-ochus*, continued fever, the common fever of this climate,—*S. mitior* and *S. gravior* are the names given to the milder and more intense forms; *Syn-ovia*, a peculiar liquid found within the capsular ligaments of the joints, which it lubricates; *Syn-thesis*, a generic term in surgery, formerly comprehending every operation by which parts, which had been divided, were re-united; also the anatomical connection of the bones in the skeleton; in chemistry it signifies the formation of any body from elements, as opposed to *analysis* or the resolution of a body to its component parts. In the next we have the terminal *n* changed into *s*: *Sys-sarcosis*, the connection of bones by muscle; and here it is altogether dropped, *Sy-stole*, the contraction of the heart auricles and arteries, opposed to *diastole*, or their dilation.

SYNOVIA (Latin *syn*, with Greek *ova*, an egg). A name given to a peculiar liquid formed within the capsular ligaments of the joints, the opposed cartilaginous surfaces of which it is intended to lubricate, and thus facilitate their various movements. It contains a considerable proportion of albumen, and hence has been likened to the glaire of egg, and called the *Synovial fluid*; from its unctuous quality it has obtained its popular name of “joint oil.” Under circumstances of irritation in the joint, there is a great increase in the secretion of this fluid; we find this to be the case in what is called “white swelling” of the knee.

SYPHILIS (Greek *siphlos*, shameful). The venereal disease, vulgarly called Pox, formerly Great Pox, as distinguished from *Vareola* or Small Pox, and French Pox, as supposed to be derived from France. Syphilitic disease, which is contracted from impure sexual connexion, is not a subject on which, from choice, we should dwell at any

considerable length ; yet, as it is necessary to the completeness of our work that this should have a due share of attention, we proceed to make such remarks as may be serviceable. Syphilis does not generally give any indications of its presence until about three, or from that to seven days after the disease is contracted ; the first noticeable symptom is the appearance of a number of pimples with inflammatory bases, which pass into simple ulcers, which are called chancres. These are on the penis in men, on the labia in women ; they should be touched with caustic once a day, and the parts should be well washed frequently, to prevent any discharge which may come from them lodging beneath the skin, and so causing irritation, and, as a natural consequence, increased inflammation. Chancres are not generally difficult to cure, if properly attended to ; but they are sometimes very obstinate, and for a long time defy the best medical skill that can be brought to bear against them. But the syphilitic poison when it has once entered into the system, is with great difficulty eliminated, and sometimes shows itself in children several generations removed from the person originally infected. It may be communicated by a pregnant woman to the child in her womb through the medium of her blood, by which the fœtus is nourished ; and thus, as in numerous other cases of disease, the children suffer for the sins of the parent. It is thought by most medical men that the only sure eliminator of Syphilis is Mercury ; and although Dr. Graves thinks that it can be cured without, yet we are inclined to hold with the majority.

The symptoms of Syphilis may be divided into primary and secondary. *Chancre* and *Bubo* (which see) come under the first denomination ; and under the last sore throat, eruptions, nodes, and disease of the nose, these latter being consequences of absorption of the venereal poison into the system and its circulation in the blood. On those parts which are essential to life, such as the brain, heart, and abdominal viscera, this poison does not appear to be capable of exercising any destructive power ; but the bones, muscles, tendons, and skin readily partake of its malignant nature. Hence we see so many persons dragging out a wretched existence, a misery to themselves, and an eyesore to society—left, as it were, by the Almighty to warn others against vicious practices, and point the moral of the preacher against vice and immorality.

Concerning the nature of the poison by which Syphilis is produced, but little is

known ; all we can say of it is, that like the contagion of small-pox, measles, &c., it produces peculiar effects, which, although varying in different persons, according to constitution, &c., are uniformly the same under similar circumstances. This poison, of which the smallest particle is sufficient to produce the most violent effects, may be communicated ;—1st. By the connexion of a healthy with an unhealthy person, who is affected with the disease in the genitals. 2nd. By the copulation with a healthy person, who is apparently healthy, but in whose genitals the poison lies concealed, without having yet produced any bad symptoms. 3rd. By suckling ; in this case the nipples of the wet nurse may be infected by venereal ulcers in the mouth of the child, or *vice versa*, the nipples of the nurse may be infected by venereal ulcers in the child's mouth, lips, or nose. 4th. By exposing any part of the surface of the body, as by kissing, touching, &c., to the contact of venereal poisons, especially if the parts so exposed have been previously excoriated, wounded, or ulcerated. 5th. By wounding any part of the body with a lancet or knife infected with venereal poison.

As long as the effects of the poison are local, we do not call it Syphilis, but distinguish it by some particular name, according to its seat and appearance, as venereal *Gonorrhœa* or *Clap*, *Chordee*, *Chancre*, or *Bubo* (which see).

Respecting the *treatment* of this complaint, we can only refer to the above heads, and earnestly recommend all who may be afflicted by it to go at once to a qualified medical man, and by no means to trust in quacks and pretenders ; thousands who have done this have bitterly rued their misplaced confidence. The after consequences of Syphilis are so terrible, that any sacrifice should be made to get it properly cured ; and, if taken in time, and in the right manner, it generally can be. When once the venereal poison gets thoroughly into the system, and the *secondary symptoms* set in, the cure must be tedious, and very uncertain, especially if the constitution be at all impaired, so that the strength of the patient does not admit of his going through the course of medicines necessary to eliminate the poison ; which if suffered to remain, will gradually eat its way into the bones and tissues of the body, producing functional derangements, and eventually, by its irritating effects, disease of one or more of the vital organs.

We may mention in a general way, that the medicines found most serviceable in

arresting this disease, are narcotics, diuretics, drastic purgatives, diaphoretics, and those especially which introduce a large portion of oxygen into the system. Mercury is indispensable, and it acts best in combination with Opium. Among diaphoretics, those which are of a warm nature are best, such as Mezereon, Guaiacum, and Sarsaparilla; they excite a determination to the skin, and so throw off the poison.

The best form in which Mercury can be given is that of the Blue Pill, 10 grains night and morning will not be an overdose to begin with; if Calomel is employed, about 2 grains a day will be sufficient, guarded by a grain of Opium; if the internal administration of Mercury produces diarrhœa, it may be introduced into the system by rubbing in strong Mercurial Ointment, about $\frac{1}{2}$ a drachm night and morning, taking at the same time Compound Decoction of Sarsaparilla $\frac{1}{2}$ a pint 2 or 3 times a day. In Syphilitic sore throat, mercurial fumigations are found beneficial; the great object here is to prevent the destruction of the soft palate and upper maxillary bone, which cause that speaking through, and falling in, of the nose which are such manifest marks of Syphilitic diseases. When the roof of the mouth is affected, a lotion of diluted Nitric or Muriatric Acid should be used; when the larynx, the mercurial which will operate most quickly on the system is usually resorted to, this is the Oxymercuriate of Mercury, or Corrosive Sublimate, which in unskilful hands is a most dangerous poison, although it forms the basis of most of the advertised speedy remedies for venereal disease.

Syphilitic Eruptions are generally distinguished by their coppery hue; they vary greatly with respect to size and character, being sometimes ulcerated and at others not. We can give no specific directions for their treatment, nor for that of the various other forms and manifestations of this disease, because we scarcely consider them amenable to domestic treatment.

SYRIGMUS (Greek *syrrigo*, to hiss). Ringing or tinkling; a sharp, shrill, successive sound.

SYRINGE. This well-known instrument is of various shapes and sizes, according to the purpose for which it is intended. (For cut and description of *Ear Syringes*, see Vol. I. p. 210. For *Enema Syringe* see *Lavement*, Vol. II. p. 75.) Another kind of Syringe is the *Stomach Pump*, of which a cut is given in Vol. II. p. 308.

The form of the instrument commonly used for domestic purposes must be suffi-

ciently familiar to our readers; the most convenient size is one capable of holding an ounce of fluid. Pewter and bone is the material of which common Syringes have been made, generally the former; but recently glass has been introduced into the manufacture of them, and very pretty and cleanly instruments may now be had at a price sufficiently low for all purchasers.

SYRUP. This is a saturated solution of sugar in water. Of itself it is not medicinal, but it is made the vehicle of administration for more active substances. Simple Syrup is made by dissolving 3 pounds of lump sugar in a pint of water by the use of gentle heat. The medicated Syrups are rather numerous; those of the London Pharmacopœia are, *Marshmallow*, *Orange*, *Cochineal*, *Saffron*, *Iodide of Irea*, *Lemon*, *Mulberry*, *Poppy*, *Rhoads*, or *Red Poppy*, *Buckthorn*, *Rose*, *Sarsaparilla*, *Senna*, *Tolu*, *Violet*, and *Ginger*; (for their properties and uses see those several heads). If made with unrefined sugar, Syrups are very likely to ferment, especially in hot weather; they should always be kept as much as possible at a low temperature, certainly under 55° Fahr.

TABASHIER. This is the native name of a substance which has long had a high medicinal reputation in the East. It is a transparent fluid, found in the jointed cavities of the sugar cane, and is almost wholly composed of *Silica* (which see).

TABELLA (Latin diminutive of *tabula*, a table). A tablette, or *Lozenge* (which see).

TABIES (Latin for a poison). Applied to anything which undermines, corrodes, and consumes. Hence the terms, *Tabies dorsalis*—decline of strength from indulgence in libidinous pleasures, which cause weakness in the back and loins. *T. mesenterica*—tubercular disease of the abdomen, sometimes called Mesenteric disease; the French name, *carreau*, refers to the hard and cushion-like prominence of the abdomen. Sauvages termed it *Scrofula mesenterica*, as indicative of scrofulous diathesis, and of the organs in which it appears. See *Atrophy*, *Scrofula*.

TACAMAHAC. The East Indian name for a resin, which is said to be the produce of the *Elaphrium Tormentosum*. This balsamic substance is used medicinally in the East.

TENIA (Greek *teino*, to stretch). Applied to tape-worms: (see *Worms*); and also to a ligament resembling a long, narrow ribbon: hence we have, *Tenia hippocampi*, the plaited edges of the processes of the fornix, which pass into the inferior cornua

of the ventricles of the brain: *T. semi-circularis*, a white line running between the convex surface of the optic thalami and corpora striata. See *Eye*.

TALC. A fossil formation nearly allied to mica; it is chiefly employed in the composition of *Rouge* (which see).

TALIACOTIAN OPERATION. A mode of forming a new nose from the integuments of the forehead, or from the arm, &c., of another person. See *Nose*.

TALPA (Latin for a mole). Applied to a tumour under the skin; sometimes to an encysted tumour on the head. See *Tumours*.

TALUS (Latin for a die, or a huckle-bone, with which the game of dice was played). Applied to the *Astragalus*, a bone resembling in shape an ancient die.

TAMARIND (said to be compounded of *tamar*, the palm tree, and *indus* or *ind*, the root of India). The *Tamarindus Indica*, is a large spreading tree of the natural order *Leguminiferae*; it is a native of the East



and West Indies, Egypt, and Arabia. The preserved fruit, which is brought to this country, is laxative and refrigerant, and infused in water forms a grateful drink in fevers. Convalescents often find the pulp a pleasant and useful addition to their diet; it keeps the bowels sufficiently open. The action of sweet purgatives, such as Cassia and Manna, is increased by this fruit; but that of the resinous cathartics is diminished by it. Preserved Tamarinds, if good, are fresh and juicy, without any musty or disagreeable smell. It is said that they sometimes get impregnated with copper from the boilers in which they are prepared. To ascertain this, clean the steel blade of a

knife and thrust it into the pulp, letting it remain there for an hour or two: if copper is present it will come out coated with the metal.

TANNIN. A principle obtained from oak bark, and other astringent vegetables, and so called from its forming the principal agent in the process of tanning. *Tannic Acid* is prepared from Galls treated with Sulphuric Ether; it makes a good astringent gargle or injection in the proportion of from 5 to 8 grains to 1 ounce of distilled water; it is sometimes given in internal hæmorrhage, and also in diarrhœa; dose, from 1 to 2 grains, dissolved in water or in a pill; it is precisely similar in its action to *Gallic Acid*, (which see), and *Acids*.

TANSY. This common roadside plant is the *Tanacetum Vulgare* of botanists, belonging to the natural order *Compositæ*. It



has a strong and peculiar odour, a warm, bitter, acrid, and aromatic taste, which is owing to the presence of a volatile oil. It is employed as a stimulant, tonic, and occasionally as an anthelmintic. Dose of the Powdered leaves from 10 grains to a drachm.

TAPETUM, Tapes. Literally a cloth, wrought into various colours. A term applied to the internal villous surface of the choroid coat of the *Eye* (which see).

TAPIOCA. The fecula or starch, so called, is the ground roots, properly prepared, of the *Jatropha Manihot*, a shrub growing in South America and the West Indies, where it is called *Cassava*; its Brazilian name being *Mandisca*. The juice of this plant is of so deleterious a nature that it is used by the Indians to poison their arrows, and even the root is so if eaten in a fresh state. The roots when taken up, are washed and scraped; they are then grated or ground

into a pulp, and this is submitted to pressure, by which the deleterious juice is expressed and preserved. The meal or pulp that remains in the press, being dried, is called *Couaque*, and is made into bread or cakes, which are called *Cassava bread*; the poisonous principle being very volatile, any of it which remains is dissipated by the heat



of baking. The expressed juice, after being allowed to stand, deposits a white powder, which when washed and dried constitutes what is called *Tapioca Meal*, or *Brazilian Arrowroot*, and by the French *Moussache*; in Guiana, *Cypipa*: this is a tolerably nutritious farina. See *Starch*.

TAPPING. This is an operation by which fluid collected in any of the cavities is removed: it can only be performed by a surgeon, therefore a description of it would be useless here. See *Dropsy*, *Trochar*.

TAR. This thick, black, unctuous substance is obtained chiefly from the pine and other turpentine trees; like *Pitch* (which see) it has been employed medicinally from the earliest times, and recently it has been strongly recommended as a remedy for bronchitis and other chest affections, the form of administration being *Tar Water*, which is made by digesting 1 ounce of Tar in 32 ounces of Water for 7 or 8 days, stirring occasionally during the time. Of the strained liquor $\frac{1}{2}$ a pint is to be taken twice a day with milk. Some have recommended the vapour of Tar, but this has gained little favour. The substance is now chiefly used as an outward application in some skin diseases, either the Water used as a lotion, or an Ointment, made by melting together equal parts of Tar and Suet: it is an unpleasant application, and Creosote Ointment has an equally good effect. See *Creosote*.

TARANTISMUS. The affection produced by the bite of the Tarantula Spider, called by naturalists *Lycosa tarantula*, a species common in the South of Europe. It appears to consist in an involuntary motion of the muscles, like St. Vitus's Dance or *Chorea* (which see); and it is said to be curable only by music, which causes the patient to dance, until, worn-out by fatigue, he sinks down senseless; out of this state he awakes as from a profound sleep, perfectly recovered.

TARAXACUM. The plant of which we here give a cut, must be well known to all of our



readers, as there are few localities where it is not met with; its medical properties are set forth under the head *Dandelion*.

TARAXES (Greek *tarasso*, to confound). An inflammatory affection of the *Eye* (which see).

TARSUS. A surgical term, signifying the space between the bones of the leg and the metatarsus. See *Foot*, *Leg*.

TARTAR. A popular name for the incrustation which appears on the teeth; it seems to be a deposit from the saliva, and consists, according to Berzelius, of earthy phosphate, 79; undecomposed mucus, 12.5; a matter peculiar to the saliva, 1; animal matter soluble in hydrochloric acid, 7.5. (See *Teeth*.)

The substance found incrustated in wine casks, and which is, in fact, an impure Supertartrate of Potash, is also called *White* or *Crude Tartar*, as well as *White Argol*.

By Paracelsus, calculus was also called Tartar; and at present, many preparations

of Potash bear the name, such as *Cream of Tartar*, which is the purified Bi-tartrate of Potash; *Tartar Emetic*, which is Nitrate of Potash and Antimony; *Regenerated Tartar*, Acetate of Potash; *Salt of Tartar*, Sub-carbonate of Potash; *Soluble Tartar*, neutral Tartrate of Potash, called also *Tartarized Kali*, or *Vegetable Salt*; *Vitriolated Tartar*, Sulphate of Potash. *Tartarine* is a name given by Kirwan to vegetable alkali or Potash. *Tartrate* is a salt formed by the union of Tartaric Acid with a basis. See *Potash*.

TASTE. This sense resides in what are called the gustatory nerves, whose filaments are found in the papillæ of various size, which exist all over the upper surface of the tongue, especially towards the tip. (See *Tongue*.)

The sense of taste seems given to the animal kingdom with two objects in view—first, as a guard against taking corrosive and injurious substances; and, secondly, to secure pleasure during the first stages of the important process of taking food. Although the sense of taste may be injuriously indulged, and thus abused, it has no doubt been furnished to man and the animal kingdom as a source of enjoyment. Temperately exercised, its use may be made a source of gratitude to the Creator; whilst abused, there are few indulgences for which man has to suffer more painfully.

TAXIS (Greek *tasso*, to put in order). The act of reducing a rupture by the hand.

TEA. The plant which produces this well-known beverage is the *Thea Viridis*, of the natural order *Theaceæ*, a native of



southern climes. It is a shrub from three to six feet high, and grows best at the sides and at the feet of mountains, and in valleys with a southern aspect; the different kinds

of Tea known to commerce are all, it is said, the result of different modes of cultivation, or of preparation, of the same species.

Tea has slightly stimulant and astringent properties, for which, besides its use as a daily beverage, it is sometimes given medicinally. The portion of tannin which it contains renders it useful as a gargle or injection.

"There is probably no substance," says Dr. Thompson, "not strictly medicinal, which exerts so powerful an influence upon the nervous system as Tea, especially the Green variety, of which many individuals cannot take even the smallest quantity without experiencing the most disagreeable effects; they become faint, the action of the nervous system is disturbed, the hand trembles, the heart palpitates, sometimes gastric spasm is induced, but more generally a feeling of raking the stomach, and of extreme hunger shortly after a full meal; lastly, there is extreme wakefulness. There are some persons upon whom green Tea produces the same effect as digitalis, and it has been medicinally employed in the diseases for which that herb has so deservedly obtained a high reputation. Desbois, of Rochefort, has, by the use of it, cured many nervous diseases which have arisen from accelerated circulation. Dr. Percival had an idea that green Tea possessed nearly the same power as Digitalis of controlling and abating the action of the heart. It is upon the nervous system that the effects of Tea are chiefly manifested; green Tea especially is distinguished by this property. It is said that a strong solution of it, applied to the sciatic nerve for half an hour, has caused death. Introduced in only a small quantity beneath the abdominal integuments of a frog, it produced complete paralysis of its hind legs, lasting for some hours. Administered as an injection to a dog, it caused a perfect paralysis of the bladder and intestinal sphincters, a partial loss of power in the hind legs, and a total loss in the tail. A poultice of green Tea leaves applied over the human stomach has caused sickness and vomiting; over the abdomen, colicky pains and purgings; over the heart, faintness and irregularity of pulsation; over the kidneys, diæresis." Were it requisite here, many more instances of the poisonous effects of this herb might be cited. True, these are chiefly the results of green Tea, but, on some, black Tea will produce nearly the same symptoms. Where individuals have any tendency to dyspeptic affections, they are very apt to be aggravated by the use of Tea, which occasions severe gastralgia;

these cases are familiar to every medical man; they are frequently cured solely by enforcing the disuse of the beverage, which, indeed, ought to be done in all such cases.

Mr. Corfe, in his lectures on the "Physiognomy of Diseases," mentions a case very closely imitating cancer of the stomach, which completely and rapidly recovered as soon as the Tea was given up; and in the *Lancet* many cases are recorded to the same effect. The action of tea in exciting mental phenomena is equally remarkable with its influence upon the body. Most students are familiar with its power of clearing the mind, and facilitating its working; many, too, have experienced its baneful effect in preventing sleep and occasioning mental irritability. At times, however, the disorder of the faculties of the mind under the influence of strong Tea, amounts nearly to insanity. Millingen says of it—"In some it is highly stimulating and exhilarating; in others its effects are oppression and lowness of spirits; and I have known a person who could never indulge in this beverage without experiencing a disposition to commit suicide."

Notwithstanding all this, however, and the known fact that the use of strong Tea has in many cases produced hypochondriasis, and deranged the nervous system, yet we are inclined to believe that its regular and moderate use will, in the great majority of cases, prove beneficial—supplying the necessary stimulus to the flagging powers, and reviving and freshening all the powers of the mind, without detriment to those of the body. But then this, be it observed, is its moderate use, not its immoderate abuse; like all other stimulants, it requires to be taken with due caution. Very strong Tea, like alcoholic drink, is mischievous, although not in such a high degree as *Spirits, Beer, &c.* (which see). Not more than two cups, only moderately strong, should be taken at the morning and evening meals; this quantity is enough, but not too much, for health. It is then, indeed, under these circumstances—

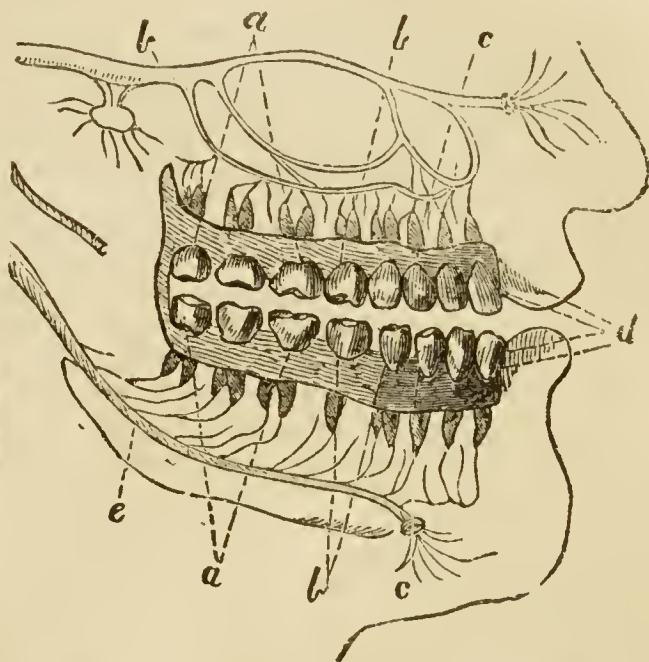
"The cup that cheers but not inebriates."

See *Adulterations*.

TEARS. The peculiar secretion which lubricates the eye; it consists of water, mucus, muriate and phosphate of soda, and phosphate of lime. One of the most curious and interesting phenomena connected with our organization, is the influence exercised by purely mental emotion on the flow of tears; it would seem that some amount of intelligent emotion is really necessary to produce this effect; children,

when they cry from merely physical causes, do not generally shed tears. See *Eye, Lacryma*.

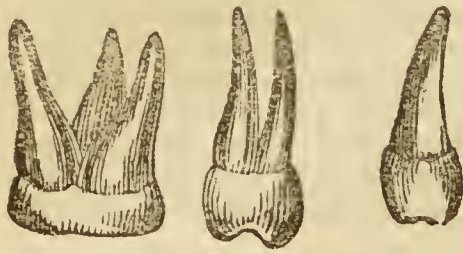
TEETH. True bony teeth are found only in the higher or vertebrated animals, and of these only the highest class—the mammalia, at the head of which is man, have them in single rows in each jaw. The human adult has these rows arched, and sixteen teeth in each row: they are of three kinds, as represented in the following diagram:—



First we have the large Teeth behind, with broad, flat surfaces, which, on account of their functions, are called *Grinders* (a); they are sometimes termed *Molar Teeth*, or *Molares*. Altogether they are twelve in number, being three on each side of both upper and lower jaw; the last of them are called *Wisdom Teeth* in man, from the fact that they do not appear until he is supposed to have attained years of discretion, viz., from the 18th to the 30th years of his age. Next to these, on each side of both jaws, are two Teeth whose surfaces are less broad, and which, having two sharp projections on each, are termed *Bicuspids* (two-pointed) (b). The sixth Tooth on each side is the *Eye Tooth* (c); it has but one point or projection, hence these Teeth have been called *Cuspidata* (pointed). From its large development in dogs, this has been called the *Canine Tooth*. Between these last on each side, coming in front of the mouth, we have four Teeth which have neither the broad surface of the grinders, nor the point of the *cuspidata*; but they are flat, having a sharp edge like a knife; hence they have been called *Incisors*, or *Cutting Teeth* (d).

The following cut exhibits more clearly

than the above, the peculiar form of the Molares, Bicuspid, and Cuspids, with their fangs or roots.



These three sorts of Teeth, which we may call grinders, tearers, and cutters, represent three classes of Teeth among the lower animals; that man has them all we may take as an evidence that he is intended to be an omnivorous feeder.

Although the Teeth form so prominent and distinguishing a feature of all the full-grown individuals of the higher forms of animals, yet most of these animals, including man, are born without any Teeth at all. When the child is born, the jaw is covered with gums, but underneath the gums are little cavities in which the Teeth are formed; and as they go on growing, they at last press upon the gum, and causing it to absorb, finally break through it. This process is called *dentition*. It is frequently a source of disordered health to children, especially if anything occurs to prevent the absorption and ready yielding of the gum to the pressure of the tooth below. The absence of Teeth during the period of human infancy evidently indicates that the food required at that period does not need their employment. It is a well-known fact, that the food of the infant is its mother's milk; but it is too often forgotten that, till Teeth are developed, Nature does not intend the child to take food that requires preparation by Teeth in order to its digestion. The practice of feeding young children with solid food, is the cause of great destruction of life; and even sops should only be sparingly administered, in cases of necessity, till the first Teeth have appeared.

From what we have before said, it will be seen that in the adult man there are thirty-two Teeth, but if we examine the jaw of a child after it has "cut" all its Teeth, and before it is six years old, we shall find that it has but twenty. Nor are these teeth increased in number by the addition of others; but whilst this first set of Teeth are performing their duties, an entirely new set is growing underneath them, in precisely the same way as they did at first. Gradually the fangs of the first set of teeth are absorbed, in consequence of the pressure of

those beneath, and they fall out, or are easily removed, and make way for the others. The order in which the Teeth appear—as well as the time—is subject to considerable deviations, but the following periods will be found to be about the time.

First, or Milk Teeth.

2 lower middle incisors,	4th to 8th mth.
2 upper ditto,	4th to 8th "
4 lateral incisors,	7th to 11th "
4 anterior, or 1st molars,	12th to 18th "
4 eye, or canine teeth,	16th to 22nd "
4 back molars,	19th to 38th "

20

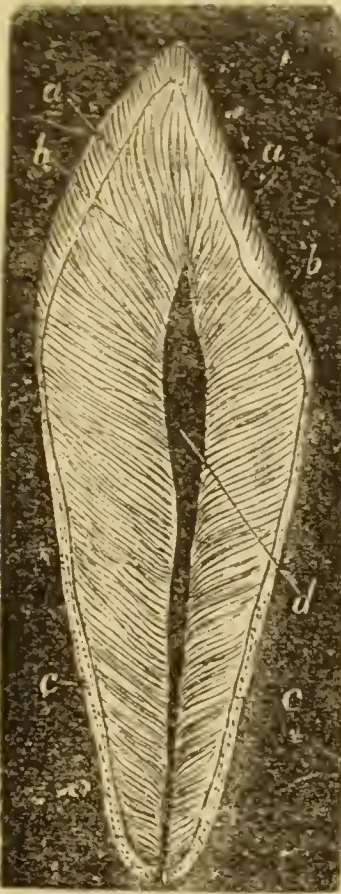
In some children, the whole of the Teeth may be cut by the end of the third year, whilst, in others, the process of dentition may be prolonged to the fifth year.

Order of Appearance of the permanent Teeth.

4 first molars, one on each of the two sides of the two jaws,	6th to 7th year.
4 middle incisors, two in each jaw,	7th to 8th year.
4 lateral incisors, a little later than the last,	7th to 8th year.
4 first bicuspid,	8th to 9th year.
4 last bicuspid,	10th to 12th year.
4 eye, or canine Teeth,	11th to 13th year.
4 second molars,	12th to 14th year.
4 back molars, or wisdom Teeth,	18th to 30th year.

32

The internal structure of the Teeth is very complicated, and has recently formed the subject of very profound research amongst the anatomists and physiologists of Europe. The minute structure is found to be no less indicative of the species of animal to which it belongs, than the whole tooth itself; so that, with regard to the Teeth we may say, that a morsel so small as not to be distinguished with the naked eye, should yet enable the skilful anatomist to judge of the form of the whole tooth, and thence to infer the particular kind of animal to which it belonged. We cannot go into details of the dental structure of the lower animals, but all that possess true Teeth exhibit the same facts as we find in man. If we make a vertical section of a tooth with a fine saw, and after having polished it on a hard and smooth whetstone, submit it to an examination under the microscope, we shall



easily make out the parts indicated in the cut. We shall discover that there are three very distinct portions. First, the enamel (in cut *a*), which covers the whole of the external part of the tooth; second, the dentine (*b*)—this substance, which is so largely developed in the tusks of the elephant and other pachydermatous animals, constitutes ivory; third, the cement (*c*) or bone, forming the external covering or facing of the Tooth. In the middle of the Tooth (*d*) is the pulp cavity. Into this cavity the

nerves and blood-vessels of the Tooth penetrate, and thus serve to maintain the living connexion between the Tooth and the rest of the body. The distribution of the nerve in this cavity will serve to explain how it is that by the removal of a decayed part, and stopping it with some kind of cement, that access to the air is prevented, and the danger of further decay removed.

Each hard part of the Tooth is differently formed. The enamel is by far the hardest of these structures, and is composed of dense semi-transparent fibres, placed side by side, and so small, that they do not measure more than $\frac{1}{1000}$ part of an inch in diameter. These little fibres penetrate the dentine beneath. This substance is composed of two parts, viz., a number of very minute tubes anastomosing with each other, and an intertubular tissue. The tubes commence in the pulp-cavity, and pass on to the outside of the tooth. The intertubular substance is composed of very minute white granules or globules. The cement which covers the outside of the fang, has a structure precisely like that of ordinary bone.

The Teeth are inserted in, or rather, developed out of, the upper and lower jaws. The upper jaw is fixed, but the lower jaw has two round projections, which are inserted into cavities in the skull, in which they move with great facility. This movement is different in different animals. In

those creatures which feed upon vegetable fibre, as it exists in the leaves and branches of plants, the jaw admits of a lateral motion, and the trituration and reduction of this kind of food is thus insured. On the other hand, in animals which partake of food that requires no bruising before it is carried into the stomach, this lateral movement would be of no use; hence in the carnivora we find this action of the jaw confined to a simple up-and-down movement, by which the food is merely divided or cut into smaller pieces. When we examine the jaw of the human being, we find that it has a combination of these two movements—that it combines the rotatory action of the ruminant, with the up-and-down movement of the carnivora.

In the course of this work, we have had to speak more particularly of the nature of the food of man; but we would here point out, that in the structure of the jaws and Teeth, we find a clear indication that he is adapted for taking food from both the vegetable and the animal kingdom, seeing that in the organs which prepare the food for digestion, we find instruments adapted for the preparation of both forms of diet. This is but one of many arguments that may be brought against the advocates of an entire animal, or vegetable diet; and had we not such abundant proof in the structure of man, we might appeal to his instincts, which, under all natural circumstances, have dictated to him a mixed diet as that which is most desirable for his sustenance.

Having said thus much with regard to the Teeth, we conclude with a few directions as to their use, and the keeping them in integrity. In the first place, then, it is evident that the Teeth of men are only adapted for dividing and triturating flesh and vegetables; and the delicacy of their structure would seem to indicate that even these forms of food should be cooked. The Teeth of man neither possess the sharpness and strength of those of the lion, nor the broad surface of those of the ox or the elephant. The attempt to masticate hard substances—to crack nuts, or in any other manner to strain the strength of the Teeth and jaws—is injurious; and many persons have to regret all their lives foolish practices of this kind.

In the next place, the Teeth should be regular. The want of harmony between the upper and lower Teeth is sometimes so great that the food is only imperfectly masticated. In the lower animals, occasionally, one Tooth is lost, when its opponent grows

to a length that is injurious to the animal. This is especially the case in the rodents ; and sometimes the Teeth, from this cause, grow so long, as to penetrate the parts of the face beyond the jaw.

The irregularity of Teeth produces an accumulation of tartar at their base, which causes an absorption of the gum, and eventually the Tooth drops out without decay. These irregularities arise from inattention to the Teeth, during second dentition ; but if proper care is taken at that period, all undue growth may be guarded against.

The Teeth should be kept clean. There are two sources of impurity to the Teeth. The first is from a deposit of tartar upon them near the gum ; and the second is from portions of food adhering to them after meals. The accumulation of tartar is a frequent source of disease in the Teeth and gums, and precautions should be taken to prevent its adherence to them. The best plan is that of cleaning them with the brush night and morning. Dentifrices are frequently employed, and, perhaps, when simple, they are of service. All chemical products, however, should be avoided. Anything which acts chemically upon the Tooth will open the way to speedy decay. The simplest dentifrice, and one of the best, is a mixture of prepared Chalk, and well-powdered Camphor. The Chalk acts as a scouring material, whilst the camphor stimulates the gums, and counteracts the decomposition of any small particles of food that may lurk amongst the Teeth. The purer the water that is employed for washing the Teeth the better.

To cleanse away portions of food adhering to the Teeth, the toothpick should be used. Metallic toothpicks are objectionable ; those made of bone or quills are to be preferred.

When Teeth are found to be decayed, immediate attention should be paid to them. They more frequently indicate serious derangement of the health than is imagined. Where Teeth are already decayed, they cannot be restored to their pristine integrity, but the decayed part may be removed, or the whole Tooth may be extracted. The sooner this is done the better ; for decay has an undoubted tendency to spread, and nothing is so disagreeable to other people as the breath of a person tainted with the faint odour of decomposing Teeth.

Decay of the Teeth frequently comes on from long-continued indigestion, from exposure to cold, from a scrofulous habit of body, from eating and drinking very hot or very cold articles of diet. Now, in all diseases, prevention is better than cure.

Persons should take care to avoid those states of the system, and those causes which are known to be favourable to the production of decayed Teeth. See *Toothache*, &c.

TEGUMENT (Latin *tego*, to cover). A covering of the body, as the cuticle. See *Skin*.

TELA (Latin for a web of cloth) ; hence it is applied to the cellular membrane, from its likeness to a web. Spider's Web used as a styptic, and sometimes given in intermittent fevers, is called *Tela araneorum*. See *Cobweb*.

TEMPER. This is the disposition or constitution of the mind, particularly with regard to the passions and affections ; thus we say a calm, hasty, or fretful Temper : how much it contributes to make or mar the happiness of man we are all fully aware, but its effect upon the bodily health is not perhaps so open to observation, although the medical man frequently has occasion to notice, and allow for it, in his diagnosis of disease. The patient of a calm contented disposition is much more easy to treat than one who is fretful and irritable, giving way frequently to gusts of passion and fits of impatience ; and very often the cure of a malady is greatly retarded, if not rendered altogether impossible, by want of control over the Temper.

TEMPERAMENT. In physiology this has been defined as a peculiar organization of the system common to several individuals, which to a certain extent influences the thoughts and actions. There is besides in each individual a further peculiarity of organization which serves to distinguish his Temperament from that of another person, to whom, however, he may in other respects bear a great resemblance. This individual Temperament is called *Idiosyncrasy* (which see). Four Temperaments were distinguished by the old physicians, founded on the notion of four qualities, which entered into the constitution of man, and were supposed to *temper* each other, and influence the character, according as one or other prevailed over the rest. These qualities were in the abstract, hot, cold, dry, moist ; in the concrete, fire, air, earth, and water ; and their highest point of development was—1st, The *Sanguine*, or *Sanguineous Temperament*, supposed to be characterised by a full habit, soft skin, ruddy complexion, blue eyes, red or auburn hair, frequent pulse, large veins, and vivid sensations. 2nd, The *Atrabilious*, or *Melancholic Temperament*, described as existing in a thinner but firmer frame than the preceding, with a dark complexion, black hair, and a slower

circulation, a nervous system less easily moved, and a character grave and meditative. 3rd, The *Bilious*, or *Choleric Temperament*, intermediate between the two preceding, marked by black curling hair, dark eyes, a swarthy, and at the same time ruddy complexion, a thick rough hairy skin, and a strong full pulse. 4th, The *Phlegmatic*, or *Pituitous Temperament*; this differs from all the rest in the laxity of the skin, the lighter colour of the hair, and the greater sluggishness of the faculties. Without keeping to the old theory, modern physiologists to a certain extent adopt these terms, to which they have added a 5th, The *Nervous Temperament*, marked by a combination of some of the above characteristics, with a quick and brilliant intellect, and great susceptibility.

Not often do these temperaments occur in a pure form; we meet with the indications of two, or even three, of them mingled in one person; whom, therefore, we must call nervous-sanguine, or nervous-bilious-sanguine, as the case may be.

Viewing Temperament as a predisposing cause of disease, we may say that sanguine persons are more liable to acute inflammation than others; nervous, to mental disorders and affections of the nerves; phlegmatic, to scrofula; phlegmatico-sanguine, to gout; and bilious, to hypochondria, and disorders of the digestive organs. See *Predisposition*.

TEMPERANCE. Very commonly this term is applied to abstinence from stimulating drinks, or to the moderate use of them; this, however, is a too restricted meaning. It behoves us to be temperate in all things, eating as well as drinking; one may be intemperate without ever getting what is well called "the worse for liquor;" and all the sensuous pleasures of life may be taken so freely as to weaken the system, and induce organic disease. Few persons live temperately enough, therefore comparatively few enjoy perfect health. Frugal meals, regular exercise, an avoidance of excitement, and unnecessary fatigue, these are the rules for a temperate liver, and such an one is likely to live a long life, and go down to his grave untroubled by bodily ailments. To "the temperance movement," as it is called, we, of course, wish all possible success. Morally and physically, in every way, teetotalism is better than drunkenness, but due moderation is better still. Let us enjoy the gifts of a good Providence moderately and temperately, but if we cannot refrain our appetites, it is best to avoid the pleasures which are a snare to us. See *Alcohol, Ale and Beer, Stimulants, &c.*

TEMPERATURE (Latin *tempero*, to mix various things in due proportion). The comparative degree of active heat accumulated in a body as measured by an instrument, or by its effects on other bodies. See *Caloric, Heat, Thermometer*.

TEMPLES (Latin *tempora*, plural of *tempus*). Literally the fall of the head, the part where it slopes from the top, its anterior and lateral portions, where the skull is covered with the temporal muscles, one of which, called the *temporalis*, arising from the temporal fossa, and inserted into the upper part of the coronoid process of the lower jaw, draws it upwards. One of the arteries which lies nearest to the surface, and is therefore most convenient for opening, as well as most liable to accident, is the temporal artery, the exact position of which we have already described. See *Arteries*.

Pain and Throbbing in the Temples is generally indicative of a disordered stomach, arising from biliary derangements; (see *Headache*). Sometimes it is nervous, and requires the treatment recommended under *Neuralgia*. See also *Hemicrania*.

TENDONS (Greek *teino*, to stretch). These are fibrous cords at the extremities of the muscles, attaching them to the bones, whose various movements are affected by them; they are strong and elastic, but are liable to be ruptured, or severed by a cut. An accident of this kind is indicated by loss of power in the limb. See *Muscles, Strains, and Achilles's Tendo*.

TENESMUS (Greek *teino*, to strain). Powerful and frequent straining at the rectum in efforts to empty the bowels, followed by discharge of mucus only. It is not infrequent in *Diarrhoea* and *Dysentery*, especially the latter, of which it is one of the most distressing symptoms. See those diseases.

TENSOR (Latin *tendo*, to stretch). Applied to a muscle which stretches any part, *T. vaginae femoris*, which arises from the spine of the ilium, and is inserted into the *fascia lata*, whence it is also called *fascialis*; it stretches the fascia.

TENT. A roll of lint inserted into abscesses, sinuses of discharging wounds, ulcers, &c., to keep them open. See *Abscess, Wounds, &c.*

TENTACULUM. Latin for a slender hook used by surgeons for securing the bleeding



artery, until the severed end can be properly tied. This should form part of an emigrant's

case of instruments. It can be made to shut up in a handle.

TENTORIUM (Latin *tendo*). A tent, or pavilion; hence the membranous partition which separates the cerebrum from the cerebellum is called *Tentorium cerebelli*, which is in a constant state of tension.

TEREBELLA (Latin diminutive of *terebra*, a perforating instrument). A trephine used for sawing out circular pieces of the skull, in the operation of *Trepanning*, (which see).

TERES. The name of two muscles, *T. major* and *T. minor*, which arise in the scapula, and are inserted into the humerus. They move the arm in various directions.

TERRA (Latin for earth). Applied to earth, as distinguished from minerals, metals, and precious stones: thus we have *T. damnata*, or *mortua*, condemned, or dead earth, the residue of some distillations, synonymous with *Caput Mortuum*; *T. foliata tartari*, Foliated Earth of Tartar, an old name for Acetate of Potash; *T. japonica*, Japan Earth, or *Catechu* (which see); *T. marita*, a name sometimes given to *Curcuma*, or *Turmeric* root (which see); *T. ponderosa*, Heavy Earth, or *Barytes* (which see); the Muriate is called *T. ponderosa salita*; *T. sigillata*, Sealed Earth; little cakes of solar earth stamped with impressions; formerly used as absorbents, &c.

TERTIUM SAL (Latin for third salts). Applied to a neutral salt, so named from its constituting a third body, differing from the acid and alkali which compose it. See *Salts*.

TERTIAN (Latin *tertius*, three). An intermittent fever which comes on every third day, the intermission lasting 48 hours, and the paroxysms generally commencing at noon and continuing under 12 hours. See *Ague*.

TEST (Latin *testes*, a witness). A substance which being added to another, tests or distinguishes its chemical nature or composition. Chemical re-agents are often used to test the purity of medicinal, or other preparations, or articles of every day consumption, and to detect the presence of poison where it may be suspected; under the heads of *Milk*, *Vinegar*, &c. we mentioned some of these, and gave directions for their use. See also *Poisons*.

TESTA (Latin for a shell). Hence we have *Testæ preparata*, prepared shells, being those of the oyster; well cleaned with boiling water, and then treated as in the preparation of chalk. This preparation is anti-acid, but possesses no advantage over the *Prepared Chalk* (which see).

TESTICLES (Latin, *testes*, a witness). The designation of two glandular bodies, called *didymi*, situated in the scrotum; they belong to the male organs of generation, and are liable to various painful affections. When inflamed and swollen, they require the treatment of inflammation generally, such as leeching, fomentation, and poultices, with Calomel for constitutional treatment, and Dover's Powder, with active aperients. The patient should have perfect rest and low diet; should rest be impossible, the Testicle, or the two (if both are implicated) should be supported by means of a silk handkerchief, bag, or suspensary bandage. Enlarged Testicle is sometimes a consequence of *Hydrocele* (which see), and also of *Rupture* (which see). Many persons have it without suffering much pain or inconvenience. It is always best to call in a medical man's advice in such a case; a non-professional person can never tell the cause, and serious mischief may be the result of neglect or wrong treatment.

Of the *Tubercula quadragemina* of the brain, the two upper are called the *nates*, the two lower the *testes*.

TESTUDO. Literally a shell-crab, or tortoise. A term under which Vogel has described a species of wen or cyst, containing a fluid which hardens into horn or nail.

TETANUS (Latin *teino*, to stretch). Contraction of the muscles of voluntary motion, attended with tension, and rigidity of the parts affected. There are five distinct forms of this affection, viz.:—1st, *Trismus*, in which the effects are confined to the muscles of the jaw or throat, this is, generally, called *Locked Jaw* (which see); 2nd, *Tetanus*, in which the body is affected, and becomes rigid, but retains its ordinary straightness; 3rd, *Emprosthotonus*, which is characterized by the body being bent forward, owing to contraction of the flexor muscles; 4th, *Opisthotonus*, in which the muscles of the back are chiefly affected, the contraction being in the extensor muscles; 5th, *Pleurosthotonus*, in which the body is drawn on one side; Sauvages termed this *Tetanus lateralis*, it has also been called *Catochus*, or *Catalepsy* (which see).

Tetanus has also been distinguished as *Acute*, *Chronic*, *Traumatic*, and *Idiopathic*, the first and second terms being applied according to its intensity, the third to those cases arising from wounds, and the last from other causes. See *Lock-jaw*.

TETTER (a corruption from the French *dartre*, or the Greek *dartos*). This term is often used synonymously with *scall*, but the affection to which it is applied is properly a

kind of *Herpes* (which see, and *Skin disease*)

THALAMUS (Greek *thalamos*, a bed). A term applied to a part of the brain from which the optic nerve arises.

THECA (Greek *theo*, to shut up). A case or sheath. Hence the spinal canal is sometimes called *Theca vertebralis*.

THEINE. The active principle of *Tea* (which see).

THENAR (Greek for the palm of the hand). Applied to a muscle extending to the thumb. See *Hand*.

THEOBROMINE. The active principle of *Cocoa* (which see).

THERAPEUTICS (Greek *therapeuo*, to heal). That branch of medical science which relates to the treatment of diseases: *Pathology* is that which investigates their nature, and *Pharmacy* that which prescribes the methods of preparing the proper remedies. (See these heads,) also *Physician*, *Pharmacopœia*.

THERMÆ (Greek *therme*, heat). Warm baths or springs. See *Baths*, *Mineral Waters*.

THERMOMETER (Greek *therma*, heat, and *metron*, a measure). An instrument for determining the degree of active heat existing in the atmosphere or other bodies; there are several kinds, but the one generally used is *Fahrenheit's*, of which a cut and description is given under *Heat* (vol. I. p. 370).

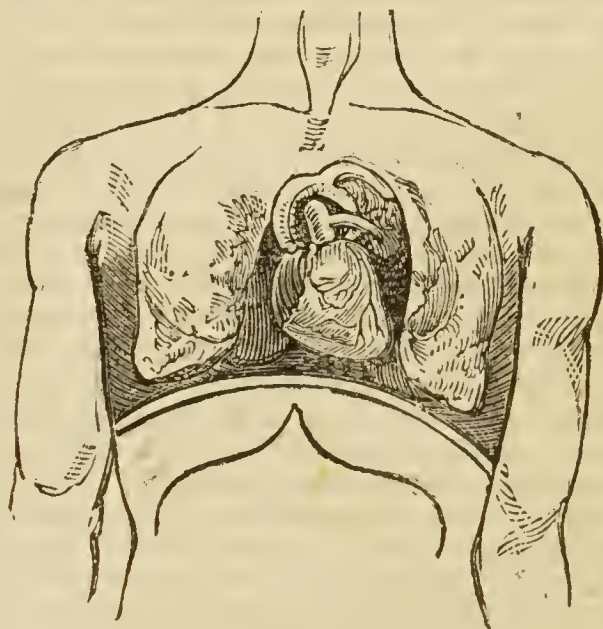
Dr. Marshall Hall has proposed a Thermometer for ascertaining minute differences of temperature: a fine tube is blown into a bulb of ten times, for example, the usual size; each 10th of a degree is then equal to a whole degree on the ordinary scale, the upper part of the tube is also blown into a bulb, forming a reservoir, and this is turned at a right angle with the tube, and contains a little mercury. The mercury in the tube is made to communicate with that in the upper bulb; the instrument is then to be brought to a given temperature by being placed in water. The connection of the mercury in the tube with that in the reservoir is to be broken; the Thermometer is then to be prepared for measuring the 10ths of a degree from that temperature downwards. (See *Atmosphere*, *Heat*, *Temperature*.) A *Thermoscope* is the name of a particular kind of Thermometer which shows or exhibits the changes of heat to the eye; and a *Thermostat* is a self-acting apparatus for regulating temperature, constructed on the principle of the unequal expansiveness of metals.

THIGH. The part of the body so-called, extends from the hip to the knee; the

longest bones in the human *Skeleton* (which see) are those of the Thighs, which incline inward at the knees: in consequence of the greater width of the pelvic bones, this inclination is especially marked in the female. Besides these bones, a mass of fleshy muscles forms the substance of this part; at the junction of the Thigh with the Trunk, is the groin, the usual seat of *Ruptures* (which see). Wounds in this part are especially dangerous, from the close proximity of the main artery which, immediately below the groin, becomes imbedded in the muscles, and thence passes round the inner side of the Thigh-bone to the ham. See *Leg*.

THIRST. This is the sensation which makes known the necessity which has arisen for the use of diluents; it is perceived in the mouth and throat chiefly, and this is evidently a sympathetic feeling, for no application of moisture to those parts will allay it, unless a supply of fluid be made to the whole system. The sensation of Thirst in hot countries, in those who suffer under a long deprivation, is described as one which if not relieved, becomes quite unendurable, leading to madness.

THORAX (Greek for the chest). That part of the body which contains the heart, lungs, and larger of the blood vessels; it is separated from the *Abdomen* (which see) by the diaphragm; up the back of it passes the spine, in front is the sternum or breast bone, and on either side it is bounded and guarded by the ribs; enclosing, as it does, the great organs of circulation and respira-



tion, and the main arterial and venous channels, this is one of the most important cavities of the body; with regard to its ex-

act position, very erroneous ideas are often entertained, a pain in the pit of the stomach being frequently referred to the chest. The foregoing diagram will serve to show how far down the thoracic region really extends.

This will also serve to illustrate our foregoing remarks upon the folly of tight-lacing, &c., by which the lower part of the chest is compressed, and the viscera contained therein prevented, for want of space, from a due performance of their functions.

Narrow chested persons are, it is well known, predisposed to pulmonary complaints, and every possible means should be taken when young to expand this part of the frame; on this subject some remarks will be found under *Exercise*. Also with regard to the examination of the chest by sounding (see *Auscultation, Stethoscope*); and for the diseases to which the chest is liable (see *Consumption, Heart, Lungs*).

THORACIC DUCT is the great trunk formed by the junction of the absorbent vessels; it is about 18 or 20 inches in length, and near its origin, in the abdomen, as large as a goose-quill, but as it ascends it diminishes in size. See *Chest, Thorax*.

THROAT. This is a term of somewhat uncertain derivation, although it is generally ascribed to the Saxon *throta*, and, as popularly understood, of somewhat indefinite meaning, for few can tell where the Throat begins and ends, or what organs it includes; it is generally understood to mean that part of the human frame in which are the passages for food and breath, viz.—the *Gullet* and *Windpipe*, (which see): or all that hollow cavity which may be looked into when the mouth is wide open. What it really means, a reference to the diagram at page 198, Vol. II., under the head *Pharynx*, will shew; by this term and *Fauces*, anatomists generally refer to the Throat, whose particular parts and affections we have spoken of under the heads *Alimentary Canal, Croup, Glottis, and Epiglottis, Quinsy, Sore Throat, Tonsils, Uvula*, and the heads above italicised. We shall now confine our attention to a Throat disease of a very fatal and alarming character, which it may be thought by some of our readers we have inadvertently omitted to notice in its proper place. They would naturally look for it under the head *Diphtheria*, but let us say in explanation, that a work like this, of great labour and research, takes a considerable time to write, and when the subjects arranged under letter D were written, this now too well known and dreaded disease was quite unknown in Eng-

land, and but little elsewhere. Even now its true character is a matter of great doubt, and, until that can be settled, there is little hope that a rational and generally successful mode of treatment can be adopted. To prove, however, that we had not lost sight of a disease which has attained a fatal notoriety, we may refer our readers to the head *Herpes Malignum*, a scientific name proposed for *Diphtheria* by a writer on the disease, who appeared to understand its nature as well as, if not better than, any of the numerous medical men who have been lately called on to treat it. To the remarks made, and the directions given under the above head, we can add but little, for although all kinds of remedies have been proposed, and have had their measure of success, yet we cannot find that any plan of treatment has been more successful than the one there laid down. All writers agree that the main characteristic of this disease is the formation of a false pellicular membrane, the origin of which is somewhat obscure; it attacks the tonsils, part of the tongue, the pharynx, the epiglottis, the larynx, and the trachea; causing suffocation by stopping the air passages. It has occurred in localities where so malignant and fatal a form of disease could scarcely have been looked for; where the surrounding country was open and beautiful, and the soil dry, and the persons attacked were not among the most wretched and ill fed. Its character is peculiarly treacherous and insidious, being first so slight as to be scarcely noticeable. By the time medical advice is sought, the pellicular exudation has reached the air passages, and death shortly ensues—often by syncope, when the case appears to be progressing favourably. Hitherto, medical measures have been attended with but little success; the best is unquestionably the application of strong caustics to the throat at the earliest possible period: hydrochloric acid is recommended; this appears to stop the progress of the false membrane; but when this has reached the trachea, and bronchi, there is little hope for the patient. It is believed by some, that this disease is to the respiratory membrane what thrush is to the intestinal, having a confervid origin, and that the effect of the poison, when absorbed, is, in its elimination, to set up an æsthenic inflammation, like Croup. Hence, the employment of counter irritation, Leeches to the trachea, Chlorine gargles, with the administration of Port Wine, Quinine, and Chlorate of Potash, would seem to be the most rational mode of treatment. Some

advocate the employment of emetics, and some of tracheotomy.

According to Mr. McDonald, who appears to have had considerable experience in Diphtheria, the best line of action is as follows:—"After a clearance of the bowels with Calomel and Rhubarb, I order strong Beef Tea, Wine, and, above all, Bass's Pale Ale; the patients express themselves much relieved in the throat as it is swallowed, and feel greatly exhilarated after taking it. The medicine I find of most use is an ounce of the Compound Tincture of Quinine, taken in wine and water every four hours. As a local application (and it is by the personal inspection of the throat, and the personal use of the applications, that we may hope to benefit the sufferer), I find the best and most efficacious is equal parts of Honey and concentrated Muriatic Acid, applied with a probang to the whole of the false membrane, about every sixth hour. As a gargle, Borax and Honey, mixed with a little Brandy and Water, is very useful; and after the stripping off of the false membranes, a gargle made with Tannic Acid and Water affords great comfort."

M. Loisseau, well known in Paris for his successful treatment of Croup by topical remedies, urges his professional brethren not to use debilitating means in the treatment of Diphtheria, but to put their trust in topical and styptic measures; he states, "that out of a large number of patients treated altogether according to his system, only two died; while more than half of those whom he attended after they had been treated with emetics and alterants, perished, and the greater part of those who recovered suffered subsequently from œdema, anasarca, and paralysis, or had to go through a protracted convalescence." We might however, go on quoting opinions, and many of them opposed to each other, until we had filled our volume; the treatment above prescribed, appears to us the most rational; that it is not always, nor even, perhaps, generally successful, we must admit. The numerous cases which terminate fatally, sufficiently prove this; but this is to be attributed to the rapid progress and malignant nature of the disease, than to want of skill in those who grapple with it; until more accurate knowledge of the causes and origin of the morbid growth in the Throat is obtained, no well-directed preventive measures can be taken; when the disease once shows itself, it is often too late for curative skill.

THROMBUS (Greek for coagulated blood), applied to a clot of blood, also to a tumour, formed by a collection of extravasated blood

under the integuments, after bleeding. When not considerable, it is generally termed *Ecchymosis*, (which see).

THRUSH. This disease, called in scientific language *Aphtha*, is common with infants who are fed improperly, or upon artificial food; it consists of an eruption of small white or ash coloured ulcers, on the inside of the mouth and edges of the lips, not unfrequently extending to the throat and fauces; it is caused by irritation of the bowels, and generally gives rise to excoriations about the anus and nates. When these symptoms appear, nurses say it is "going through" the child, and indicate a speedy termination of the disease. Under ordinary circumstances, and if sufficient attention be paid to it, Thrush is not a dangerous affection; but if neglected, and sometimes if not, it assumes a gangrenous character, the ulcers increase in size and become livid; it is then much to be feared.

Treatment. As this disease is nearly always attended with diarrhœa, some anti-acid and astringent mixture should be given, after, perhaps, one dose of Rhubarb and Magnesia; the Compound Chalk Mixture of the Pharmacopœia, with a few drops of Laudanum should the irritation be very great. To the eruptions of the mouth should be applied, with a camel hair brush, a little Honey and Borax, in the proportion of 6 drachms of the former to 2 of the latter; or, in aggravated cases, a lotion composed of Nitrate of Silver, 1 scruple dissolved in 1 ounce of Water. Dust over the excoriated nates and anus with Hair Powder, or dap them with Goulard Water, two or three times a day. If the child is at the breast, great attention should be paid to the diet of the nurse; if not, the food must be at once simple and nutritious, milk forming the chief part of it: if the disease assumes a gangrenous character, there will be great exhaustion, and Beef Tea and Tonics will be required; for young children something like this:—Dilute Nitric Acid, 1½ minims; Syrup of Orange Peel, ½ an ounce; Infusion of Calumba, 1 drachm; Water, 3 ounces; take a dessert spoonful twice or three times a day.

For adults, who are sometimes affected with Thrush, as a consequence of taking food that is indigestible, or that does not agree with them, an active aperient is first necessary; an application of Borax and Honey for the mouth, and if this is not effectual, a wash of Nitrate of Silver, as above directed, or of Nitric Acid and Water, ½ a drachm of the former to 4 ounces of the latter. Thrush sometimes appears among

the sequelæ or other diseases, and in this case, may be looked on as evidence of weakness; showing that the patient requires a generous diet, with tonics, a change of air, &c.

THYMIOSIS is a name given by Swediaur to *Frambasia* or *Yaws* (which see).

THYMUS (Greek for a kind of onion, or a blister on the flesh). A gland situated in the thorax of the fœtus, has been so called; a trace of this remains during youth, but in old age it usually disappears entirely.

THYROID (Greek *thyreos*, a shield). The shield-like cartilage of the larynx; hence the names of the following muscles:—

Thyro-arytænoides, *T. epiglottideus*, and *T. hyoideus*, which assist in the movements of the *Glottis*, *Epiglottis*, and *Larynx* (all of which see). *Thyrophraxia* is a term which has been applied to *Goitre* (which see).

TIBIA (literally a flute or pipe). The great bone of the leg, commonly called the shin bone; the above name was given to it from its resemblance to a pipe, the upper part representing the expanded or trumpet-like end, and the lower part representing the flute end of the pipe. See *Leg*.

TIC DOLOREUX (French *tic*, spasm, and Latin *dolor*, pain). This is a painful affection of the nerves of the face, coming on in sudden and excruciating attacks. Its characters are acute pain and convulsive twitchings of the muscles, which continue from a few minutes to several hours. It affects chiefly the fifth pair of nerves, or the nerves of sensation, although it sometimes attacks those of expression—the seventh pair, in which latter case the face of the patient is spasmodically drawn on one side, sometimes without pain. Tic Dolo-reux usually affects persons whose digestive organs are deranged; sometimes it is connected with rheumatism, or with a malarious condition of the atmosphere. Sometimes a carious bone will produce it, and frequently it arises from decayed teeth.

Abernethy used to say that in these cases there were “two functions wrong—those of the nervous system on one hand, those of the digestive on the other. You must seek to put the digestive organs right, or to soothe the nervous system, according as the one may seem to be the principal cause of the disease.” When it arises from imperfect digestion, in which case there is costiveness, loss of appetite, and furred tongue, active aperients must be given, so as to open the bowels freely. Colocynth and Galbanum Pills, $\frac{1}{2}$ a drachm of each, divided into 12 pills, two to be taken every night

until the desired effect is produced. If there is acidity of the stomach, in which case there will be acid eructations and a sour taste in the mouth, give Carbonate of Soda, 10 grains in Water, with $\frac{1}{2}$ a drachm of Tincture of Ginger. When the work of digestion is properly performed, give Carbonate of Iron in $\frac{1}{2}$ drachm doses, mixed with Honey or Treacle, three times a day with a couple of the Opening Pills occasionally. If the affection assumes the character of an intermittent, give Quinine as in ague. Poppy Fomentations will sometimes afford relief to the excruciating pain, or a Liniment made thus, rubbed into the face: Extract of Aconite 1 scruple, Soap and Camphor Liniment, of each 1 ounce. If ease and rest can only be obtained by narcotics, Belladonna will be found the most effectual; 1 grain of the Extract should be taken when the paroxysm is coming on, and repeated every two or three hours until relief is effected. See *Neuralgia*.

TICK BITE. Ticks belong to the family of *Acaridæ*; they are of a roundish, flattened form, and are provided with lancets which enable them to penetrate the skin of those whom they infest; three kinds generally cause the troublesome sores above named. The *Acarus domesticus*; *A. scabiei* and *A. autumnalis*; the domestic Tick which collects in the head, and is found near gangrenous sores; the Itch Tick; and the Harvest Bug. See *Acar*.

For treatment (see *Lice* and *Itch*). The inflammation of the skin caused by the Harvest Bug may be allayed by an application of Goulard Lotion.

TIGLIUM. The wood of the *Croton Tiglii* when administered in small doses, is said to have a diaphoretic effect; the *Root* is a drastic purgative and is given in Amboyna and Batavia as a remedy for dropsy; the Leaves are also purgative, and are supposed to be an antidote to the bite of the cobra; the seeds yield by expression the powerfully drastic *Croton oil* (which see). The acrid principle extracted from the seeds of this plant has been called *Tiglin*.

TINCA (Latin for a tench). Hence the *Os Uteri*, from their supposed resemblance to the mouth of a tench, are called *Tincæ Os*.

TINCAL. Crude Borax, as it is imported in greenish crystals from the East Indies, is so called; when purified, it becomes the commercial *Borax* (which see).

TINCTURE (Latin *tingo*, to tinge). A solution of certain principles of vegetable or animal matter in spirit, of greater or less strength. For most Tinctures, proof spirit

is sufficiently strong, but some require rectified spirit. The following are the preparations of this kind which are found in the Pharmacopœias.

Tincture of Aconite, dose from 7 to 10 minims; *Simple and Compound Tinct. of Aloes*, purgative and stomachic, dose 1 to 2 drachms; *Comp. Tinct. of Ammonia* 5 to 10 minims, stimulant and antispasmodic; *Tinct. of Assafœtida*, stimulant and antispasmodic; *Tinct. of Belladonna*, narcotic, 3 to 8 minims; *Comp. Tinct. of Benzoin*, antispasmodic, expectorant, stimulant, $\frac{1}{2}$ to 2 drachms; *Tinct. of Culumba*, tonic, 1 to 2 drachms; *Comp. Tinct. of Camphor*, anodyne and expectorant, 1 to 3 drachms; *Tinct. of Cantharides*, diuretic, stimulant, 10 to 60 minims; *Tinct. of Capsicums*, stimulant, 10 to 60 minims.

Comp. T. of Cardamums, carminative and stomachic, 2 to 4 grains; *T. of Cascarilla*, tonic and stomachic, 1 to 2 drachms; *T. of Castor*, antispasmodic, 20 minims to 2 drachms; *Comp. T. of Catechu*, astringent, 1 to 2 drachms; *Simple and Comp. T. of Bark*, tonic and stomachic, 1 to 3 drachms; *Simple and Comp. T. of Cinnamon*, astringent and stomachic, 1 to 3 drachms; *Simple and Comp. T. of Colchicum*, cathartic, diuretic, and narcotic, 20 to 30 minims; *T. of Conium*, narcotic, $\frac{1}{2}$ to a drachm; *T. of Cubebs*, stimulant and purgative, 1 to 2 drachms; *T. of Digitalis*, stimulant and sedative, 20 to 30 minims; *T. of the Ammonia-Chloride, and Sesqui-Chloride of Iron*, tonic and astringent, dose of the first, from 1 to 2 drachms, of the second, from 10 to 60 minims; *T. of Galls*, astringent, $\frac{1}{2}$ to a drachm; *Comp. T. of Gentian*, tonic and stomachic, 1 to 2 drachms; *T. of Ginger*, stimulant and carminative, 1 to 2 drachms; *Comp. T. of Guaiacum*, stimulant and diaphoretic, $\frac{1}{2}$ to a drachm; *T. of Hellebore*, emmenagogue, $\frac{1}{2}$ to a drachm; *T. of Hops*, tonic, and sedative, 1 to 3 drachms; *T. of Hyoscyamus*, narcotic, $\frac{1}{2}$ to 2 drachms; *T. of Jalap*, cathartic, 2 to 4 drachms; *Comp. T. of Iodine*, absorbent, emmenagogue, and stimulant, 10 to 30 minims; *T. of Kino*, astringent, 1 to 2 drachms; *Comp. T. of Lavender*, stimulant and stomachic, $\frac{1}{2}$ to 2 drachms; *T. of Lobelia*, antispasmodic, 1 to 2 drachms; *T. of Myrrh*, deobstruent, $\frac{1}{2}$ to 2 drachms; *T. of Opium*, narcotic, 15 to 30 minims; *T. of Orange Peel*, tonic and stomachic, 2 to 3 drachms; *Comp. T. of Quinine*, tonic and stomachic, 1 to 3 drachms; *Comp. T. of Rhubarb*, tonic and aperient, 2 to 3 drachms; *T. of Squills*, diuretic and expectorant, 10 to 30 minims; *Comp. T. of Senna*, stomachic and purgative, 2 to 8

drachms; *T. of Serpentary*, tonic and diaphoretic, 1 to 3 drachms; *T. of Tolu*, expectorant, 10 to 30 minims; *T. of Valerian*, antispasmodic, 1 to 3 drachms; *Comp. T. of Valerian*, antispasmodic, $\frac{1}{2}$ to a drachm. Tinctures are convenient forms of administering many medicines, and they possess the special advantage of keeping good for any length of time. Those of which the ingredients are at all bulky, such as senna, require a press; and few, if any of them, can be made to advantage, except in large quantities, therefore it is best to buy them ready made of some druggist who can be depended upon for their correct preparation and strength.

TINEA (Literally a moth-worm). A term applied to scald-head, when the scabs resemble the holes in cloth which has been moth-eaten. When the eruption resembles a honeycomb, it is termed *favus*; when the discharge is unusually acrimonious, it is called *achores*. See *Porrigio, Skin Disease*.

TIN GLASS. An old name for *Bismuth*, (which see).

TINNITUS AURIUM (Latin *tennio*, to tinkle or ring like metals). Ringing in the ears. This and other unpleasant noises in the ear occur in most fevers and inflammatory affections of the brain; when chronic, they are symptomatic of accumulation of wax, of neuralgia, dyspepsia, or of determination of blood to the head. A little aperient medicine will often relieve the symptoms, or syringing the ear with warm water; if it does not, a surgeon had better be consulted.

TISSUE, or *Texture*. These terms are applied to the disposition or arrangement of the component parts of the body. Tissue is called *adventitious* or *accidental* when it is a morbid growth or production, whether it is entirely a new formation, distinct from the natural growth, or assimilated thereto. A part, which is of a fibrous structure, is called *fibrous Tissue*; then we have the *cellular* and *mucous* Tissues, often called *Membranes* (which see).

TITUBATIO (Latin *titubo*, to stagger). General restlessness, accompanied by a perpetual desire to change the position. See *Fidgets*.

TOAST. If not too thick, and equally browned over, without being burned, bread is probably more easy of digestion, toasted, than otherwise; but, as it commonly is, saturated with butter, it is most indigestible, and irritating to the stomach; invalids should never take it so prepared; if they take Toast at all, it should be either dry with a little marmalade on it, or it should

be suffered to get cold before it is buttered, and then but thinly.

TOAST-WATER is a pleasant and wholesome drink for sick persons, if prepared properly, which it seldom is. It should be done thus : cut half a slice off a stale quartern loaf, toast it thoroughly without burning it ; put it into a jug with a small piece of orange or lemon peel ; pour on it a quart of boiling water. Let the whole stand two hours, covered up, then pour off the liquid and keep it in a cool place for use.

TOBACCO. The dried leaves of the *Nicotiana Tabacum*, of the natural order *Solanaceæ*, or Nightshades ; originally a native of tropical America, but now cultivated in all countries sufficiently warm to bring it to maturity. "Strange," observes Mr. Hogg, in his excellent work on "The Vegetable Kingdom and its Products," "that a stinking repugnant herb, smoked by savages in the wilds of Central America, should have spread so rapidly, not only over the civilised world, but even among nations farthest removed from civilisation ; that it should have become the source of immense revenues to

snuff. It was not long, however, before inconveniences involved in the practice began to appear, and a host of enemies were raised against it. Theologians pronounced it an invention of Satan, which destroyed the efficacy of fasting—a point much disputed in the 16th and 17th centuries. Councils forbade it to all ecclesiastics under their control ; Popes Urban VIII. and Innocent XI. punished the use of it with excommunication ; Sultan Amurath IV. with the most cruel kinds of death ; and Schah Abbas II. with penalties almost as severe. Michael Feodorovitch Tourieff ordered a bastinado for the first offence, cutting off the nose for the second, and the head for the third. Prussia and Denmark simply prohibited, and James of England wrote against it. Finding that no penalties, however severe, could check indulgence in this luxury, sovereigns and their governments soon found it much more advantageous to turn it into a source of revenue ; and the cultivation and manufacture of Tobacco was gradually subjected, almost everywhere, to fiscal regulations, restrictions, or monopolies, which still prevail in various forms over the greater part of Europe."

And so, we may add, "the weed" has become an admitted "institution" in every land, and among every people. With us, all classes smoke Tobacco, or chew it, or sniff it up the nostrils ; and some of its greatest lovers, not content with taking it in one of these ways, do it in two, and even three. What our opinion of the pernicious custom is, will be found under the head of *Smoking*. Taken in the form of snuff, we believe the plant to be equally deleterious, and so largely is this article adulterated, that no snuff-taker can possibly tell what poison, in addition to that of the herb itself, he may be applying to his olfactory nerves and absorbents. Like many other poisons, Tobacco is sometimes useful as a medicinal agent ; its leaves are indebted for their peculiar properties to the presence of a volatile alkaloid, called *Nicotin*, and also an oil ; its effect on the system is that of a narcotic and sedative, producing sickness, and depressing the action of the heart ; it is also slightly diuretic and anti-spasmodic : in over doses it produces convulsions, which are likely to terminate in death. It has been given to relax the muscular system in colic, constipation, and hernia, and has been administered by enema to relieve spasmodic constriction of the bowels ; it is, however, far too dangerous for domestic use. The dose of the Powdered Leaves is from 1 to 5 grains ; of the Wine, from 16 to 40 minims. To-

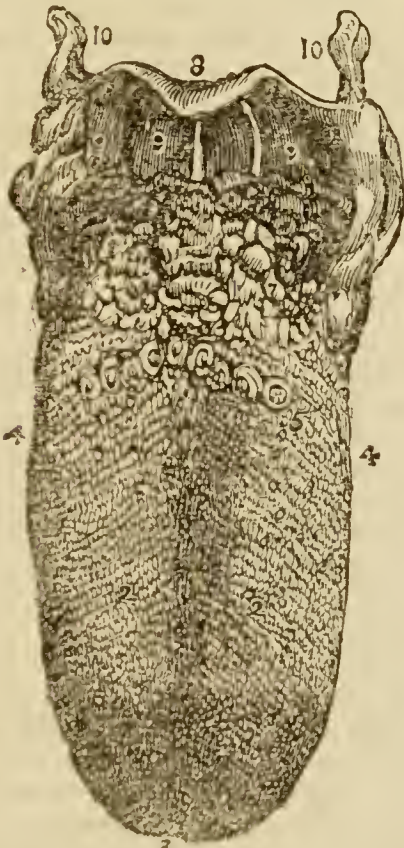


powerful governments, and operated in some degree even on the manners and customs of the peoples. Imported from America, soon after the discovery of that continent, it was received into the Old World with a species of enthusiasm, and Europeans, Asiatics, and Africans began to smoke, to chew, and to

tobacco wash has been found useful to destroy parasite insects, and to make an ointment for ulcers and eruptions of the head. Poisoning by Tobacco requires the prompt use of the Stomach Pump or Emetics, and the same general treatment as is recommended for the narcotic class, under the head of *Poisons*.

TOLERANCE (Latin *tolero*, to bear). Applied to the power of the system to bear a remedy.

TONGUE. This organ, which is altogether that of *Taste*, and to some extent that of *Speech* also (see those two heads), is composed of muscular fibres, which are distributed in layers arranged in various directions. Between these fibres is a considerable quantity of adipose substance, and in the middle is a vertical septum of fibrous tissue. The Tongue is connected behind with the *os hyoides* by muscular attachment, and to the epiglottis by mucous membrane, which forms the three glosso-epiglottic folds called *fræna epiglottidis*. At either side it is held in connexion with the lower jaw by mucous membrane, and in front a fold of that membrane, which is named *frænum linguae* is formed beneath its under surface. The Tongue is covered by a dense layer, analogous to the corium of the skin, which gives support to *papillæ*. A *raphe* marks the middle line of the organ, and



divides it into symmetrical halves. We give here a cut from Wilson, exhibiting the

Tongue with its *papillæ*. 1 is the *raphe*, which sometimes divides into two branches, as in the figure; 2 2 are the lobes, the rounded eminences here, and near the top, being the *papillæ fungiformes*, the smaller ones among which they are dispersed being the *papillæ coniceæ* and *filiformis*; 3, tip of the Tongue; 4 its sides, on which are seen the lamellated and fringed *papillæ*; 5 5 the A-shaped row of *papillæ circumvallata*; 6, *foramen cecum*; 7, mucous glands at the root of the Tongue; 8, epiglottis, with its *fræna* (9 9); and 10 10 mark the greater cornua of the *os hyoides*.

We give these scientific terms for the benefit of those who may wish to study the anatomy of the part: let us now explain the matter more simply and clearly.

The Tongue, like the whole of the internal passages of the body, is covered with mucous membrane. This membrane, when examined, is found to be a continuation of the skin which covers the external surface of the body, and, like it, is composed of two principal parts—a layer of fibres and vessels, covered above with cells. It is the condition of these superficial cells that constitutes the difference between the skin and mucous membrane. The first are always dry and hard, whilst the latter are soft, and covered with a fluid secretion, called *mucus*. This membrane covers the whole surface of the Tongue, and is prolonged below, passing on either side of a mass of tissue under the Tongue, which is called the *frænum*, or string of the Tongue. It is this part of the Tongue which, being prolonged to an unusual extent along the floor of the mouth, constitutes the condition which is called “tongue-tied.” It is very seldom indeed that this affection exists to an extent to require interference; but it is very often imagined to be present by officious nurses and anxious mothers, when the structure of the tongue is perfectly natural. It is to be feared, too, that the simplicity of the process of cutting the *frænum* has sometimes induced surgeons to perform this operation when there was no necessity. It should, however, be known that occasionally so large a blood-vessel may be wounded in this proceeding as to produce alarming consequences on the system of a new-born babe.

Under the mucous membrane, and causing projections on its surface, lie the *papillæ* of the Tongue. These *papillæ* vary in size, but are very obvious to the naked eye when the Tongue is put out. On examining them with the microscope, they are found to consist of blood-vessels and nerves. The

erves which are sent to these little papillæ are not supplied from the same nerves which are furnished to the muscles in order to give them the power of movement, but from a special source; and the branch of the nerve which is thus supplied is called the *gustatory*, on account of its being the part of the nervous system which gives the special sense of taste. Through this organization, then, the Tongue is not only enabled to assist in mastication, but it becomes the principal source of enjoyment in the taking of food, that is agreeable to the taste.

The mucous membrane, as well as the form of the Tongue, are liable to considerable changes in appearance, indicative of disordered states of the system. It is on this account that the Tongue is so constantly examined by the medical man in diseases of the body. Its form and movements will often indicate the general state of the nervous and muscular systems; whilst the appearance of the surface is an index to the condition of the mucous membranes throughout the whole body. Dryness, redness, smoothness, and the amount of white secretion on its surface, are all points from which important conclusions can be drawn, both with regard to the nature and treatment of disease.

With regard to the morbid appearances of the Tongue, we may note that it is sometimes *loaded*, as it is termed, the upper surface being covered with a layer of mucous substance which may be scraped off with a Tongue scraper; this indicates a foul stomach; in severe cases of dyspepsia this coating often becomes very thick and peels off, leaving the Tongue red, moist, and tender; sometimes the coating is dark brown, resembling fibres, which admit of being separated by the fingers; it is then said to be *furred*, and this is symptomatic of great local irritation arising from inflammation. In feverish conditions of the system the Tongue becomes very dry and hot, parched, as it is called; if clammy and viscid, there is usually derangement of the digestive functions; a yellow tinge on the coating of the Tongue indicates biliary disorder; a thin creamy white, inflammatory disease in the abdomen; in sore throat we often find it of a dingy whitish colour; in scarlatina we have elongated papillæ, presenting bright red spots; and in some forms of intestinal irritation and hæmorrhage, it is morbidly clean and red. In anæmic patients we find this organ partaking of the general condition of the system, being pale and flaccid; in paralysis it is drawn on one

side; in *delirium tremens*, and nervous affections, it is tremulous; and in low stages of fever it becomes almost black, and cannot be protruded. Thus to the instructed eye the Tongue affords a pretty sure indication of the state of the system, and is always consulted by the physicians as a reliable authority.

Before, however, such evidence can be properly weighed, an acquaintance with the normal condition of the organ is necessary; some Tongues are scarcely ever thickly coated under any circumstances, and others are scarcely ever clean, be the bodily health ever so good; some are always dry, others always moist, and in shape and size they differ considerably in different individuals; the medical attendant will understand and allow for all this.

The Tongue is subject to inflammation, ulceration, and other maladies, among them that terrible one *Cancer*. In the first case there will, it is likely, be a great increase in the size, a full longitudinal incision down each side will afford quick relief by the loss of blood. For ulcerations, commonly caused by indigestion or mercurial salivation, a lotion of Chlorate of Potash, 2 drachms to the $\frac{1}{2}$ pint, should be used frequently, with gentle aperient medicine. For *Cancer* but little can be done. See that head.

TONICS (Greek *tonos*, from *teino*, to stretch). Medicines which restore the tension and vigour of the muscular fibre when it is weakened and relaxed; they may be divided into classes, as thus:—those which act *indirectly* by passing into the blood, and exerting their influence through the circulation; these are the Bitter Tonics, such as Calumba, Camomile, Cinchona, Gentian, Quassia, Quinine, Salicine, &c. The *direct* Tonics include Iron in its various forms, the Mineral and Vegetable Acids. Among Non-Medical Tonics may be named, Cold as variously applied, Exercise, a Pure and Bracing Air, and Mental Emotions of a pleasant and stimulating character. See also heads of the several diseases, among whose remedies Tonics have a prominent place. *Tonicity* is a term sometimes used to denote strength and elasticity of the muscular fibre.

TONSILS (Latin *tondeo*, to clip or shear). These are the round, or oval-shaped glands situated between the arches of the palate; they secrete a mucous fluid, the use of which does not seem quite clear. In their natural state they can easily be discerned slightly projecting on each side of the fauces, but when swollen and inflamed, as they often are in weakly and scrofulous persons, they

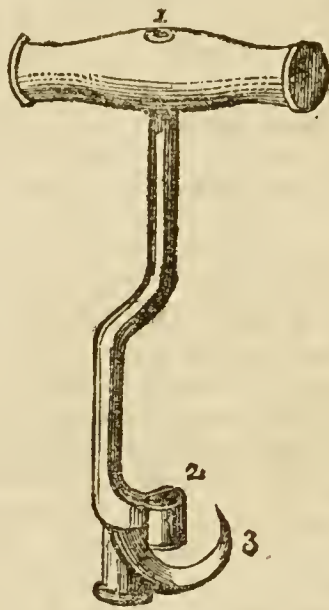
are very noticeable, being bright red, and often hanging down, so as nearly to close the passage of the gullet, and render swallowing very difficult. With enlarged Tonsils, there is always, more or less, thickness of speech, and a great liability to sore throat or quinsy. Tonics and astringent gargles are required for such enlargement, and a long perseverance in the latter is necessary; the glands should be now and then brushed over with a solution of Nitrate of Silver, or rubbed with the stick itself; but this should be done very carefully, so as not to touch the surrounding parts. Should the enlargement become prominent, it is best to have the Tonsils cut by a surgeon; this is not a dangerous nor very painful operation. In ulcerated sore throats, the Tonsils generally become impaired, and are very painful and even dangerous; to inflammation of the throat the term *Tonsillitis* has been applied. See *Throat, Ulceration*.

TOOTH ACHE. For this distressing and very common malady almost every one has a "sure cure," the peculiarity of which is, that it does little or nothing to mitigate the anguish of the sufferer to whom it is recommended, which anguish is commonly caused by the exposure of the interior pulp, containing the nerve and blood-vessels, to external influence, by decay of the outer portion of the Tooth. Among the remedies which we have to suggest, as having found them pretty generally successful, are, Creosote, Chloroform, and Laudanum; separately or in combination, they may be tried all ways: the mode of application is to saturate a small piece of lint or wadding, and introduce it into the hollow of the Tooth, keeping it there as long as may be necessary; should there be no available hollow, put it as close as possible to the seat of pain. Many of the other remedies recommended we have known to afford relief occasionally; such as inhaling the vapour from Henbane Seeds, put on a hot piece of metal; chewing a piece of Pellitory Root; or using the Tincture; putting a piece of Sal Prunella in the mouth and allowing it to dissolve; applying a drop or two of the Oil of Cloves, or Cinnamon, on lint; or thrusting into the hollow Tooth a piece of wire previously dipped in strong Nitric Acid; this application, if properly made, destroys the nerve, but it must be very carefully done, so that the acid does not touch the other teeth or the mouth. An aching Tooth may oftentimes be stopped, and remain serviceable for years; but this must not be done while the nerve is in an inflamed state, as in this case

the pressure will but increase the anguish. Where a Tooth is so far gone as to be very troublesome, it is best to have it out; the pain of the operation is sharp, but short, while the constant ache, ache, ache, destroys alike health and spirits, and unfits one for all the active duties of life. See *Teeth*.

TOOTH EXTRACTING. This is one of the minor surgical operations which might, if the necessity arise, be performed by a member of a household, or a community, to relieve another of suffering. We would by no means counsel resorting to an unskilful hand for such relief; but pressing occasions for it may, and do often, arise, when the aid of a surgeon or dentist cannot be obtained; especially is this likely to be the case with emigrants, with an eye to whose use and advantage much of this work has been written.

The instruments required for this operation are a key, like the one here represented,



and two or three pairs of Forceps, like those of which cuts are given at page 286 of vol. I., if only two pairs are procured, one should be straight and the other curved. By skilful dentists the key is now almost discarded, but the amateur will find it indispensable for the double teeth. This instrument consists of a handle, which is placed cross-wise to the direction of the cushion (2), which acts as a fulcrum, and the claw (3), which is fixed on with a screw, so that it can be taken off, and another substituted, should it not be of the size required for the tooth; several of these claws are sold with the keys. Now, as to the mode of operation: Cause the patient to sit down low—on the floor is best—so that you have a good command of his position; let him throw his head well back against your

body; then, having previously guarded the cushion of the key (2), by wrapping a piece of lint round it, place the instrument so that the points of the claw come just below the crown of the tooth on the *outer side*, and the cushion rests opposite to it on the inner; then, grasping the handle, give a firm, though gentle turn inwards; and if the claw is properly fixed, and the top of the tooth does not break off, it will be lifted out of the socket. The operation is rather a trying one to the nerves of one unpractised in the work; there is the consciousness of inflicting excruciating pain, the fear of failure, and of an accident, such as a breakage of the jaw. But having once determined on the necessity of the act, these must not be suffered to influence the mind. There must be no haste, no jerking of the instrument, or the mischief apprehended will be very likely to occur. When the Tooth is out, put into the cavity a piece of lint soaked with Laudanum. After the mouth has been rinsed with warm water, if the bleeding should be excessive, soak a piece of lint in a strong solution of Alum or Sulphate of Copper, and press it in as lightly as possible, avoiding for a time all unnecessary motion in the jaw, or taking of hot drinks. (See *Hæmorrhage*.)

The forceps are required for single teeth, before and behind which the two blades or claws are fixed, so that they are below the crown or widest part of the tooth, and exactly opposite to each other, just within the margin of the gum; then, grasping the divided handle firmly, and pressing the two halves together, lift the tooth with a gentle rotatory motion out of the socket by the mere strength of the wrist. In this case there is no lever power to assist the hand, and the muscles must do it all. Dentists say that it is best so, as they can then apply just the amount of force required, and "feel their way." Cases of jaw fracture with the forceps very rarely occur, with the key they are not unfrequent. (For treatment of such, see *Fractures*.)

For extracting stumps of Teeth, an instrument called an Elevator is required, but this no unprofessional hand should attempt to use. Under the head of *Infant* (vol. II. p. 39), will be found a cut of a Gum Lancet, which is sometimes required for loosening the gum from the Tooth previous to extraction; it is best for an amateur always to use this, or he may lacerate the gum in his operation.

To delicate, nervous females, and even to sensitive men, Tooth extraction is a very formidable operation, however skilfully per-

formed; yet we would not recommend the use of chloroform, or other anæsthetics, except there were stumps to extract, or several Teeth to be drawn. Intense cold and electricity have lately been called in to render this a painless operation, and we see no objection to the employment of such agents.

TOPHUS (Greek for a crumbling gravel stone), applied to a swelling which particularly affects the bone, or the periosteum.

TOPICA (Greek *topos*, a place). This term is applied to topical or local remedies, those applied to the immediate seat of disease, in contradistinction to those which aim at effecting a cure by acting on the system generally. The two classes of remedies may be used together, as they commonly are.

TORMENTILLA. This plant, which is the *Tormentilla Erecta* of botanists, and belongs to the natural order *Rosaceæ*, is plentiful on barren pastures and heaths of this country. It contains about 18 per cent. of tannic acid, and is given medicinally as an astringent tonic, and in internal hæmorrhages and



fluxes. It is well adapted for astringent lotions, and gargles, &c. Dose of the Powdered Root from 30 grains to a drachm; of the Decoction, made by boiling 1 oz. of the root in 1½ pints of water until reduced to a pint, 1½ ounces three times a day.

Some of our older physicians entertained a high estimation of the virtues of this plant. Dr. Graham says;—"It is a mild,

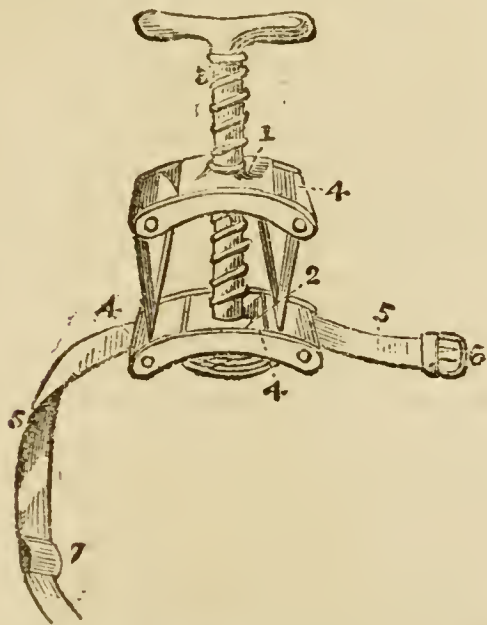
yet powerful astringent, of great service in looseness and dysentery; it operates without producing any stimulant effect, and is therefore well adapted to check the diarrhœa attendant upon pulmonary consumption, and in other cases of that complaint, where the general excitement is considerable. For this purpose its union with small doses of *Ipecacuanha* forms a very eligible medicine." Dr. Thornton says:—"I have found in fluxes of blood, a drachm (of the powder) given four times a day do wonders;" and he speaks of cases of obstinate ague, long-standing diarrhœas, and scorbutic ulcers, which had been sent out of hospitals as incurable, cured by a strong decoction of the plant, sweetened with honey.

TORMINA (Latin plural of *tormus*, an obsolete word). The griping pains which sometimes accompany enteritis and diarrhœa.

TORPOR (Latin *torpeo*, to be benumbed). Insensibility, mental or corporeal. This is very commonly the result of debility arising from long-continued illness, or old age; it is sometimes called *Torpidude*.

TORTICOLLIS (Latin *torqueo*, to twist, and *collum*, the neck). See *Wryneck*.

TOURNIQUET (French *tourneus*, to turn). An instrument for checking the flow of blood into a limb during an operation, or for



arresting hæmorrhage by pressure until some more permanent mode can be devised.

Of this instrument we give a cut, by which it will be seen to consist of an upper and lower portion (1 and 2), which can be drawn together or separated, by means of a screw (3). Connected with these portions are rollers, through which is run a strong band of webbing (5) into a buckle (6) at one end, and at the other a moveable pad (7). To apply the instrument, buckle the band (5)

around the limb, and adjust the pad so as to press upon the course of the main artery above the seat of injury. Then, by a few turns of the screw, the band will be shortened around the limb, and pressure exerted by means of the pad to any required degree, and thus the flow of blood may be controlled and hæmorrhage arrested.

TOUS-LES-MOIS. This is a recently introduced starchy matter like arrowroot, which it closely resembles in its properties. It is the fecula, or starch, procured from the rhizomes of several species of *Canna*, as *C. Coccinea*, and *C. Archiras*. See *Starch*.

Tow. The waste fibres, or refuse, after carding flax. It is used in surgery for filling up the hollows in splints, and other contrivances for setting fractures, &c. The Latin name is *Stuppa* (which see).

TOXICODENDRON, or *Poison Oak*. This is an American plant, and is sometimes called the Virginian Sumach; it is the *Rhus Toxicodendron* of botanists, of the natural order *Terebinthaceæ*; the Leaves are poisonous in large doses, but from 1 to 3 grains may be given safely; they stimulate the nervous centre like strychnia, and are therefore given in cases of local paralysis, whether of sensation or motion. In chronic rheumatism and obstinate skin diseases, they have been found useful.

TOXICOLOGY (Greek *toxicon*, poison, and *logos*, a description). An account of poisons, their classification, effects, &c.

TRABECULA (Latin diminutive of *trabes*, a beam). A small beam: a term applied to the small medullary fibres of the brain, which constitute the commissures. See *Brain*.

TRACHEA (Greek *trakos*, rough). The Windpipe. This is the passage through which air is forced from the lungs to produce vocal sounds. It is a muscular and cartilaginous tube, and is sometimes called *arteria aspera*, from the roughness or inequality of its cartilages. The Trachea is cylindrical for about two-thirds of its circumference, and flattened in the posterior third, where it rests on the œsophagus; it extends from opposite the fifth cervical vertebræ, to opposite the third dorsal, where it divides into the two bronchi; the length of the tube is about four inches, and its diameter from side to side nearly an inch; it is somewhat larger in the male than female. The right bronchus, larger than the left, passes off at nearly right angles, to the upper part of the corresponding lung. The left descends obliquely, and passes beneath the arch of the aorta. The cartilaginous rings of which this tube is com-

posed are connected by membranes, the outer one being fibrous, and the inner mucous, and supplied with nerves, blood vessels, and mucous follicles. (For cut of *Trachea*, see *Lungs*, vol. II. p. 103.) Sometimes inflammation of this tube occurs; it is called *Tracheitis*; (for treatment, see *Inflammation*, and *Throat*). The operation of making an opening into the windpipe, which is sometimes necessary, is termed *Tracheotomy*.

TRACHELOS (Greek for the *Neck*). Hence the terms *Trachelo—mastoides*, and *T. Scapular*, the first being a muscle, which draws the head backward or obliquely; and the second being the designation of certain veins, which arise near the neck and shoulder, and contribute to form the external jugular. See *Veins*.

TRAGACANTH. This substance is a gummy exudation from several species of *Astragalus*, natural order *Leguminosæ*. The best and, indeed, the only true Tragacanth is the produce of *A. Vera*, a small shrub, which is a native of the Levant. This gum, which consists principally of *Bassorine*, is not soluble in water, but when moistened it swells up into a very tenaceous paste or mucilage,



which is used as a demulcent in coughs, diarrhœa, &c., but chiefly as a vehicle for other medicines. The Compound Powder of Tragacanth is given in doses of from $\frac{1}{2}$ to 1 drachm, mixed with water it forms a mucilage useful for suspending insoluble powders.

TRAGUS (Greek *tragos*, a goat). A small cartilaginous eminence at the entrance of the external ear; so named because it is sometimes hairy, like the beard of a goat. A muscle of a triangular form, arising from

the middle and outer part of the concha, and inserted into the top of the Tragus, which it pulls forward, is called the *Tragicus*. See *Ear*.

TRANSFORMATION (Latin *transformo*, to change from one shape to another). This term denotes those accidental or adventitious tissues, which usurp the place of the natural structure of organs.

TRANSFUSION, (Latin *transfundo*, to pour from one vessel into another). The act of transfusing the blood of one animal into the veins of another. The operation of injecting the blood of a healthy person into the veins of one sinking from the exhaustion of hæmorrhage has been, on several occasions, tried with good results; but the idea that a diseased person can be restored to health and vigour by this act, as some have believed, is altogether erroneous.

TRANSUDATION (Latin *transudo*, to perspire). A term sometimes applied to the act of *Perspiration*, or the process by which fluids pass through porous substances. By some anatomists the arteries and veins are represented as being porous, and parting with their contained fluids by transudation, imbibing at the same time extraneous fluids, by capillary attraction.

TRANSVERSALIS (Latin *transversus*, across). Hence the terms *T. abdominis*, a muscle which supports and compresses the bowels; *T. colli*, a muscle which turns the neck obliquely backwards and to the side; *Transversus auris*, *T. Pedis*, and *T. perinei*, the names of three muscles, the first of which belongs to the ear, the second to the great toe, and the third to the urethra, which it is supposed to dilate. See *Muscles*.

TRAPEZA (Greek for a table). Hence the terms *Trapezium os*, and *Trapezoides os*, two bones, which belong to the row that supports the metacarpal bones (see *Foot*); and *Trapezius*, a muscle which draws the scapula in several ways, according to the direction of its fibres. See *Scapula*.

TRAUMATIC (Greek *trauma*, a wound). Belonging to, or caused by, *Wounds* (which see). The well-known styptic, Friar's Balsam, Jesuit's Drops, or Wade's Drops, as the Compound Tincture of Benzoin has been variously called, was also termed *Traumatic Balsam*.

TREACLE, or *Molasses*. The uncrystallizable part of common *Sugar* (which see).

TREMOR (Latin *tremo*, to tremble). Tremulous agitation of the limbs, hand, &c. This may be the result of old age, or of *Palsy* (which see). It may also be the result of an abuse of the constitution by *Intemperance* (which see).

TREPAN (Greek *tryphao* to perforate). The operation of trepanning is sometimes performed on those who have so injured the skull that it is necessary to remove part of the bone ; this is accomplished by means of a kind of circular saw called a *Trephine*.

TRIANGULARIS STERNI. A muscle which arises from the lower part of the sternum and ensiform cartilage, and is inserted into the cartilages of the 3rd, 4th, 5th, and 6th ribs ; it depresses the ribs, and is a muscle of expiration ; it is sometimes called *Sternocostalis*.

TRICEPS (Latin *tre*, three, and *caput*, a head). Anything three-headed, as some muscles are, and are hence called by such names as *T. extensor cubiti*, and *T. e cruris* ; the first of these extends the forearm ; the second has been separated into three divisions, arising from one or other of the *Trochanters* (which see).

TRICHIASIS (Greek *trixos*, the hair). An unnatural direction of the cilia, or eyelashes, in which they turn in against the eyeball. This affection is sometimes called the *Pilare Malum*, or *Tricosis*.

Distichiasis, or "double row," is a modification of this affection ; this is a partial series of cilia produced on the inner margin of the lid, in addition to the natural row.

TRICUSPID (Latin for having three points). A term applied to the valve situated between the right auricle and the right ventricle of the heart, on account of being divided into three triangular portions.

TRIFACIAL (Latin for having three faces). Applied to the grand sensitive nerve of the head and face, commonly called the 5th pair.

TRIGONAL (Greek for having three angles). Applied to a triangular space on the fundus of the bladder, where the mucous membrane is smooth or void of ridges.

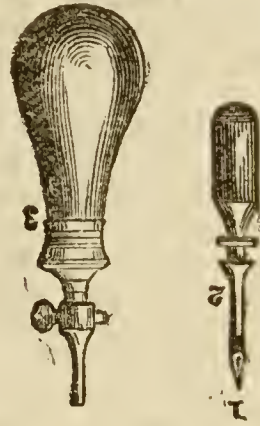
TRIQUETRA. The triangular bones sometimes found in the course of the lambdoidal suture in the *Skull*, (which see).

TRISMUS (Greek *triso*, to gnash with the teeth). Locked-Jaw. See *Tetanus*.

TROCHANTER (Greek *trokao*, to run or roll). The name of two processes of the thigh-bone—the *major* and the *minor* ; they are named from their office of receiving those large muscles which bend and extend the thigh, and turn it upon its axis ; they form, as it were, shoulders to the thigh-bone. A rough line situated between the greater and lesser Trochanters, to which the capsular ligament is attached, and into which the quadratus femoris is inserted, is called the *Inter-trochanteral line*.

TROCHAR (French *trois quart*, three-

fourths). An instrument so called from its point being of a triangular form ; it is used to discharge aqueous fluids from the different cavities of the body, and consists of two distinct portions, a perforator or *stilette* (1), and a sheath, or *canula*, (2). In using, the



point of the perforator, (1) makes the opening in the part to be emptied of fluid ; the instrument passes in up to the neck of the sheath, (2) which fits close to the perforator, the latter is then withdrawn, leaving the former in, to serve as a passage for the fluid. When the cavity is emptied, an injection is sometimes thrown in by means of the elastic bag (3) whose pipe fits close to the canula ; this latter is then withdrawn, and the wound covered with plaister, or other dressing. This is the instrument used in tapping for *Dropsy* or *Hydrocele* (which see).

TROCHISCUS (Greek diminutive of *trokos*, a wheel). A lozenge or round tablet, made up with sugar, or a glutinous substance and some drug, of which this is a pleasant and convenient mode of administration. Owing to the uncertainty of their strength, these preparations are not much ordered, or recognized by the medical profession ; but they have their advantages. See *Lozenges*.

TROCHLEA (Greek *trokos*). The name of a pulley-like cartilage, through which the tendon of the trochlear muscle passes. See *Ear*.

TROCHOIDES (Greek *trokos*, a wheel, and *eidōs*, likeness). Wheel-like ; a species of diarthrosis, or moveable articulation of bones, in which one bone rotates upon another, as the radius upon the ulna.

TRONA. The African name for the Sesquicarbonate of Soda, which is collected on the coast of Barbary by the natives, and imported into this country. See *Soda*.

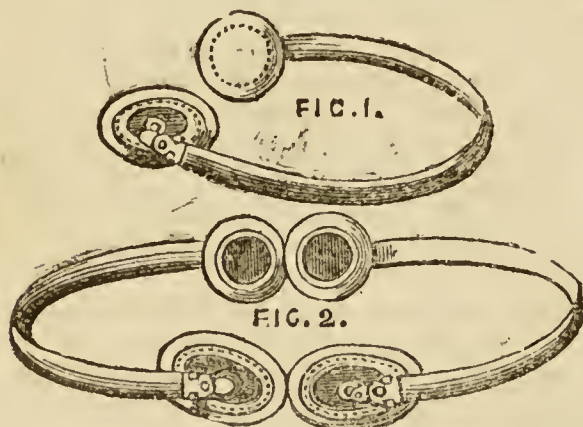
TROPICAL DISEASES. The effects of a residence in a warm climate are oftentimes such as to induce a peculiar class of diseases, which we distinguish by the above name, and to which incidental references will be found under such heads as *Bile*, *Climate*,

Heat, Fever, &c. Liver complaints, as they are termed, are almost universal with Europeans who have sojourned long in tropical climes, and dyspepsia is very general. Directions for the treatment of these will be found under their proper heads.

TRUSS (French *trousse*). A bandage, or apparatus used in cases of Hernia, to keep up the reduced parts, and prevent further protrusion.

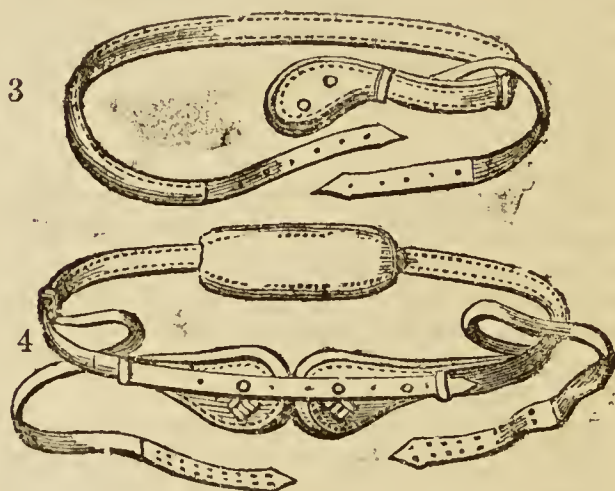
Having under the heads of *Hernia, Prolapsus, Rupture, &c.*, given an account of the different kinds of injuries for which Trusses are required, we have only now to describe the varieties in the apparatus necessary to be worn. This will depend very much upon whether the rupture is *umbilical, inguinal, femoral, or scrotal*; although several other varieties are spoken of under the head of *Hernia*, yet these are the principal ones, and all that a non-professional person need trouble himself about; for the others can only be distinguished and treated by a surgeon. For umbilical Hernia, the seat of which is the navel, an elastic bolt, with an expansion in front, in the inner centro of which is a pad, or a truss on the ball and socket principle, is all that need be worn: if the case is very bad, with much protrusion and enlargement of the abdomen, an apparatus expressly made for it will be required.

For Inguinal Hernia—the most common form—Packham's opposite-sided Truss is perhaps the best; the principle is the same as that of Salmon and Ody's expired patent, here represented (1). In this, if the injury is



in the right side, the spring passes round the left side of the body, and across the lower part of the abdomen, to the seat of the Rupture; if in the left side, then the spring passes round the right side of the body, the back and front pads being connected with a strap, in Packham's, which we think the better arrangement. With the Double Truss (2) each oval pad is placed on its own side, the spring not extending

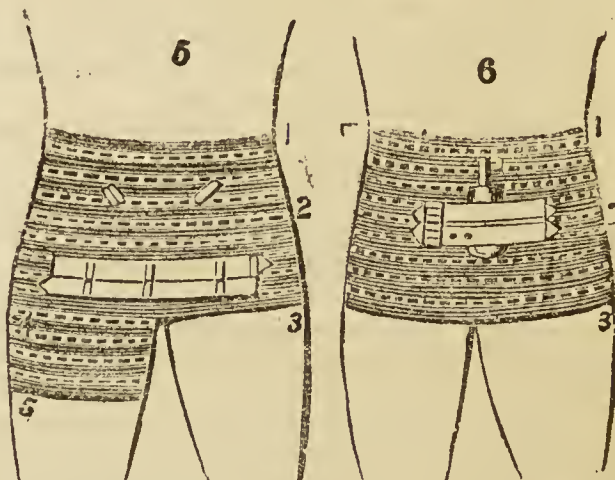
over the front. The principle of this kind of Truss may also be adapted to such femoral Ruptures, as are situated lower down in the thigh, by having an elongated pad, or a spring with a downward curve at the end, and using a thigh strap; but for many of these the old fashioned Truss suits best; see cuts 3 and 4; the first being single and



the second double. Here we have a thick pear-shaped pad, with a downward curve; the lower straps are intended to pass under the thigh.

For Scrotal Hernia very frequently a Bag Truss has to be worn; that is similar to a *Suspensary* (which see), but much larger; when, however, the bowel, which passes out of the abdomen at the groin, and afterwards glides down to the scrotum, can be returned, and there is no permanent swelling, the same kind of pressure is available as in Inguinal Rupture.

In some cases, where it is difficult, and, indeed, almost impossible, owing to the flatness of the back, to make a Spring Truss keep in its place, the Elastic Belt, with air pad, of M. Bourgeaud, may be used with



success. Of this invention we give a cut No. 5, representing the invention adapted to inguinal or femoral, and No. 6 to um-

blical Rupture. This, we see, answers the purpose, not of a Truss only, but also of an abdominal supporter. There is an equalized pressure over the parts adjacent to the seat of Rupture, and at that spot the pressure is increased by an internal air pad, and by drawing tight the straps over it.

Ruptured persons should always be very cautious of muscular exertion, without support to the part, and also to remove their truss, if the bowel gets down beyond the pad; in this case it is better to be without an instrument than with one. The Truss should be taken off on retiring to rest, and put on again before the body assumes the erect position in the morning, care being taken that none of the prolapsed viscera is out of its proper places. The Truss should be kept covered with a linen ease, which can be changed frequently; otherwise the leather will get wet with perspiration, and unpleasantly harsh and stiff in a short time, as well as dirty. It is best to get a well-made Truss, and have it fitted on by a competent person; almost every one has its peculiarities, and a trifling difference in the length or strength of the spring, or in some one or other of the details of make or arrangement, may render the instrument rather injurious than beneficial.

TUBER (Latin *tumeo*, to swell). A protuberance, or tuberosity: hence the terms *Tuber ischii*, a round knob forming that point of the ischium upon which we sit; hence this bone has been named *sedentarium*. The *Tuberosities* of the os humeri are two small lumps of unequal size, called the greater and smaller, situated at the upper end of the bone, just behind the head.

TUBERCULUM (diminutive of *tuber*). A small swelling, called a *tubercle*; it occurs as a peculiar morbid product in various organs. The *Tubercula Quadragemina* are four tubercles occurring on the posterior surface of the Pons Varolii; the two upper are termed the *nates*, the two lower the *testes*. *Tuberculum Loweri* is a thickening of the muscular coat of the heart, by which the orifices of the *venæ cavæ* are separated from each other.

TUBULUS (Latin diminutive of *tubus*, a pipe). Hence *Tubuli lactiferi*, *T. semmiferi*, and *T. uriniferi*; the first being the tubes of the *papilla*, through which the milk passes; the second, those which constitute the parenchyma of the testes; and the third, those minute convergent tubes which constitute the tissue of the tubular substance of the *Kidney* (which see).

TUMID LEG. See *Phlegmasiæ*.

TUMOUR (Latin *tumeo*, to swell). This term is commonly applied to any kind of swelling, but properly it means one of a permanent kind. Tumours are capable of division into two classes, viz., *Sarcomatous*, so named from their firm fleshy feel; they have been classified by Abernethy into, 1st, *Common Vascular*, or *Organized Sarcoma*, including all those tumours which appear to be composed of the gelatinous part of the blood, rendered more or less vascular by the growth of vessels through it; 2. *Adipose Sarcoma*, including fatty Tumours, formed at first, like the preceding, of coagulated lymph, rendered vascular by the growth of vessels into them, and depending for their future structure on the particular power and action of the vessels; 3. *Pancreatic Sarcoma*, so called from the resemblance of its structure to that of the pancreas; 4. *Mastoid*, or *Mammary Sarcoma*, so called from the resemblance of its structure to that of the mammary gland. This species is placed between such sarcomatous Tumours as are attended with no malignancy, and the following ones, which have this quality in a very destructive degree; 5. *Tuberculated Sarcoma*, composed of a great many small, firm, roundish Tumours of different sizes and colours, connected together by cellular substance; *Medullary Sarcoma*, so named from its presenting the appearance of the medullary matter of the brain; 7. *Carcinomatous Sarcoma*, or Cancerous Tumour. In the second class are the *Encysted*, commonly called Wens, and consisting of a cyst, which is filled with matter, the species are, 1, *Steatoma*, containing fat-like matter; 2, *Meliceris*, or honey-like matter, 3, *Atheroma*, or pap-like matter.

All kinds of swellings, then, of a permanent character, come properly under the designation of Tumours. The *White Swelling* on the knee, and *Cancer*, are both Tumours; so are the fleshy protuberances which we see on the necks, or the heads of persons, attaining occasionally an enormous size without causing much, if any derangement of the general health. Commonly, when one of these get so large as to be inconvenient, it may be removed by a surgeon without any danger to the patient; and not unfrequently, when the base of connection is not very large, they may be got rid of by tying a ligature of silk, or metallic wire, tightly round it, and so, by stopping the circulation by which it is fed and supported, cause it to become dead matter, and slough away.

"Carcinomatous Tumours," says Abernethy, "in common with the encysted, may be considered as edifices built up by diseased

actions, and which these actions continue afterwards to inhabit. The treatment of both these, and the encysted Tumours, may be regarded as the same, viz. that of reducing the temperature of the part, and applying leeches when the inflammation is active, and the use of stimulants when the inflammation has quite subsided, and the Tumour is of an indolent character. In all cases where Tumours are formed, an increased and sometimes a disordered action of the vessels which form them is supposed. In the growth and reproduction of destroyed parts, a glutinous material is first effused, which afterwards becomes vascular; and this process is adduced as the simplest manner in which Tumours are formed. It is probable that all Tumours are at first formed in this way, but that the peculiarities which they afterwards exhibit depend upon some diseased peculiarity."

Fleshy Tumours may be either fibrous or fatty; the former are the most difficult of removal. Abernethy says of the latter kind—"It is such as young men who wish to distinguish themselves should be on the look out for. You have a patient apply to you with a swelling; you make an incision into it, put in your finger, turn it round between the capsule and the Tumour, and out it comes." Of encysted Tumours, says the same authority, "I should not be inclined to inject or irritate them by the introduction of a tent; but to lay the part freely open, squeeze out the contents, put on a bread and water poultice, and attend to the state of the general health." See *Wens*.

TUNBRIDGE WELLS. These waters are pure carbonated chalybeates, containing about $1\frac{1}{4}$ inches of carbonic acid, and $\frac{1}{2}$ an inch of nitrogen to the pint. The proportion of oxide of iron is small, about $\frac{1}{8}$ of a grain; and this, owing to the presence of the carbonic acid, remains in solution at a temperature of 140, so that it acts strongly even on persons in health; and so much so on invalids, that those who have any inflammatory symptoms, or are of plethoric habits, should not take them. Where there is debility of the digestive organs, causing dyspepsia, squamous disease of the skin, gravel, languor, and uterine debility, these waters are found serviceable. The wells are situated in Kent, about 40 miles from London, amid picturesque scenery, upon a dry soil, and in a situation screened from the north-east winds.

TUNICA. The upper tunie of the Romans; hence it is applied to several membranes of the body, viz., *T. albuginea oculi*, a fibrous membrane situated immediately

under the conjunctiva; *T. conjunctiva*, or *adnata*, a mucous membrane which lines the posterior surface of the eyelids; *T. Ruyschiana*, an inner lamina of the choroid membrane, so called after Ruysch, who first injected it; *T. arachnoidea*, a cobweb-like membrane, situated between the dura and pia mater; *T. albuginea testis*, a fibrous membrane enveloping the testes; *T. vaginalis testis*, a serous membrane of that part.

TURBINATED BONES (Latin *turbo*, a top). Two bones of the nostrils, so called from their being formed in the shape of a top, or inverted cone. They are also called the *Inferior Spongy Bones*, to distinguish them from the upper spongy bones, which form part of the ethmoid bone, and from their spongy appearance.

TURMERIC. The root of the *Curcuma Longa*, of the natural order *Zingiberaceæ*, a native of India and Cochin-China, is a

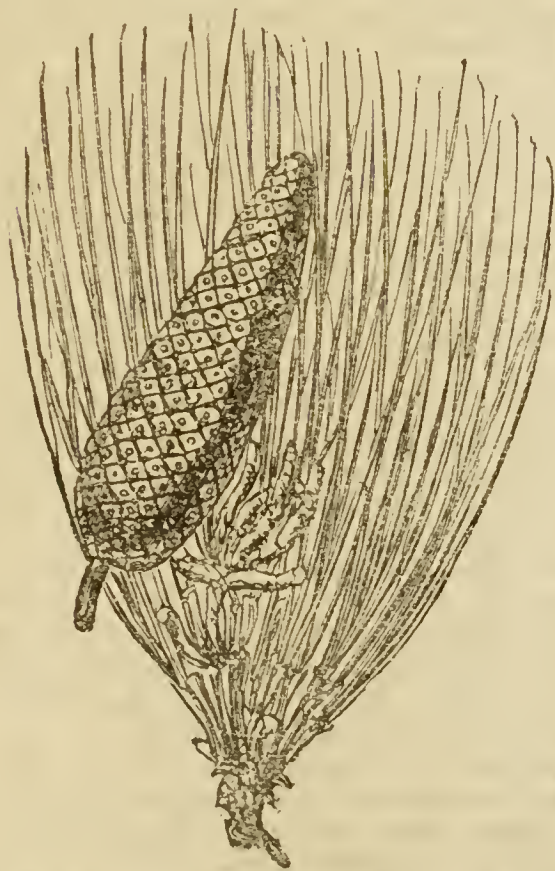


stimulant aromatic, and is used like ginger in the East as a condiment, entering largely into the composition of Curry Powder. It is sometimes given in doses of from 15 to 20 grains, twice a day, for flatulence. In India it is sprinkled on ulcers to stimulate them to healthy action.

TURNER'S CERATE. This is the *Ceratum Calamine* of the Pharmacopœia, consisting of prepared Calamine and Wax, of each $\frac{1}{2}$ a pound; Olive Oil a pint. It is a good application for ulcers with a thin acrid discharge; to burns after the inflammation has abated; and to the eyelids in affections of the tarsi.

TURNIPS. These belong to the order *Cruciferae*, or mustards; they are among the most nutritious of culinary vegetables, containing albumen, sugar, and a considerable proportion of fibrine. These, however, are combined with much water, and the whole having a laxative and diuretic effect, Turnips are apt to disagree with persons of weak digestion, and cause flatulency. The scientific name of the Turnip is *Brassica Rapa*; in its wild state it furnishes an oil similar to Rape and Colza. Turnip Poultices are sometimes used when moist warmth is required; but these are objectionable on account of the smell.

TURPENTINE (Latin *Terebinthina*). The Oil or Spirit of Turpentine, as it is commonly called, is procured by distillation from the resinous exudations of many trees of the pine tribe, but especially from the *Pinus Palustris*, or Swamp Pine, of America, of which we give a cut.



The action of Turpentine on the system is anthelmintic, diaphoretic, diuretic, purgative, and stimulant; it is also given as an astringent: externally it acts as a rubefacient. As an anthelmintic it should be given in combination with Castor Oil, lest, failing to purge, it should stimulate the urinary organs too much, and produce dysuria; as a diuretic, it is prescribed in dropsy and suppression of urine; as a purgative, it is useful in cases of tym-

panitic distension of the abdomen, and in acute stages of puerperal fever; as a stimulant to the nervous system, in neuralgia and epilepsy; as an astringent, in internal hæmorrhages, and to check the mucous discharge in gonorrhœa and leucorrhœa. Guthrie and others have prescribed it in inflammation of the eye. The ordinary dose, as a stimulant and diuretic, is from 10 to 30 minims; as a cathartic or vermifuge, $\frac{1}{2}$ an ounce to 2 ounces, with Castor Oil: the best mode of administration is to suspend it in mucilage or yolk of egg. In the London, Edinburgh, and Dublin Pharmacopœias, is a Turpentine Liniment to be applied on lint to burnt or scalded surfaces, and a Turpentine Enema useful as a vermifuge, and as an antidote in *Tympanitis* (which see).

Canada Balsam, *Chio* or *Cyprus Turpentine*, *Common* or *Stone Turpentine*, *Strasburgh Turpentine*, and *Venice Turpentine*, are all the products of different species of Pines, which belong to the natural order *Coniferae*; they differ but little in their medical properties.

TURPETH or **TURBETH**. A name given to the cortical part of the root of a species of convolvulus brought from the East Indies; it never came much into use as a remedial agent.

TURPETH MINERAL, the name given by chemists to the Bi-sulphate of *Mercury* (which see).

TUSSIS (Latin for a cough). Hence the terms *T. humida*, *T. sicca*, *T. convulsiva*, humid, dry, and convulsive, or *Whooping Cough* (which see).

TUSSILAGO (Latin *tussus*). The scientific name of a native plant, belonging to the order *Compositæ*, has from the earliest ages been regarded as a powerful expectorant. It is commonly called *Coltsfoot* (which see).

TWINS (Latin *gemini*). This term comes properly under the head of Multiparous Labours, that is, labour complicated by a plurality of children, mostly produced at a common birth; but sometimes, owing to the incidental death of one of them, there is sometimes a material difference in the time of their expulsion, and consequently in their bulk, or degree of maturity giving us, according to Dr. Good, two varieties, *Congruous* and *Incongruous Twinning*, the first being of equal, or nearly equal growth, and produced at a common birth; and the second, of unequal growth, and produced at different births. See *Labour*.

TWITCHING (Saxon *twiecan*, to pull out with a jerk). Short spasmodic contractions of the muscles, a not uncommon symptom

of many nervous disorders. (See *St. Vitus's Dance*.)

A single muscle, or a set of muscles may be affected in this way, causing a jerk or involuntary motion of the head, or hand, or some other part, which is very inconvenient and disagreeable.

TYLOSIS (Greek *tylos*, a callosity). A swollen or knotty state of the eye-lids, in which the margin often loses its natural form and appearance. Thickening of the lids has been also termed *Pachy-blepharosis*; and when attended with loss of the cilia, the affection has been termed *Ptilosis*. See *Eye*.

TYMPANIS (Greek *tympanon*, a drum), commonly called *Tympany*. A distension of the abdomen, which returns a drum-like sound when struck with the hand. It is caused by an accumulation of gas in the abdominal cavity, and sometimes occurs in fevers and acute inflammations, in which case it is a very alarming symptom. In Chronic Tympany, or Drum-belly, there may be an enormous distension, so as to interfere with all active exertion, and even to impede the breath. Clysters of stimulant aromatics, such as Assafoetida, Peppermint, Turpentine, and warm stomachic medicines, such as Sal Volatile, Tincture of Cardamums, Valerian, &c., will probably afford relief; if not, Mineral Acids with bitter tonics, should be tried. The bowels should be kept well open with aperients, like Tincture of Rhubarb.

TYMPANUM (Greek *tympanon*). A narrow chamber which opens into the posterior fauces through the Eustachian tube; and commonly called the *Drum of the Ear* (which see).

TYPE OF A DISEASE. This is the combination of prominent and characteristic symptoms, which are said to be typical of a prevalent disease, such as fever, &c., marking with more or less distinctness all the cases.

TYPHOMANIA (Greek *typhos*, stupor, and *mania*, madness). An affection consisting in perfect lethargy of body, with imperfect lethargy of mind, wandering of ideas, and belief of wakefulness during sleep.

TYPHUS. A genus of simple continuous fevers, attended with a greater or lesser degree of atony, or exhaustion, throughout their whole course: they are contagious or infectious, and often epidemic, but are most likely to attack debilitated persons, and such as are of uncleanly habits. There are two kinds of Typhus, the *malignant* and the *mild*; the latter is the low nervous, or typhoid fever of this country, which has a

slow insidious origin, and lasts from 14 to 28 days. See *Fevers*.

ULCER, ULCERATION (Greek *ulkos*, a wound). A solution of continuity in any of the soft parts of the body, either open to the surface, or to any internal cavity, and attended with a secretion of pus or some kind of discharge, is an Ulcer; and the process of forming this is ulceration. There are various kinds of Ulcers, such as *Cancerous*, *Fistulous*, *Gangrenous*, *Inverterate*, *Scorbutic*, *Scrofulous*, and *Simple*. They are also divided into *Local* and *Constitutional*; and into *Simple* and *Specific*. In ulceration the lymphatics are as active as the arteries, and absorb the pus as soon as it is formed, causing thus a disappearance of the natural structure without, as in the case of abscess, anything to supply its place. It is by this destructive process going on between an abscess and the skin, that the latter is laid open to the surface. Wounds in the flesh, if at all deep, are very likely to pass into Ulcers; thus, instead of healing as it is called, by "the first intention," they remain open, discharging pus or matter, and presenting a granulated surface; this we should call a healthy Ulcer, or one tending to heal; if on the contrary there is no appearance of filling up with red granulations, but the hollow rather deepens, and the disorganized tissue comes away in a black or bloody discharge, this is an unhealthy, or sloughing Ulcer, and if not changed in its nature, will penetrate more and more deeply, and will either reach some vital part, or kill the patient by exhaustion. Where there is not sufficient energy and vitality in the system to resist the process of destruction in the tissues, and build up anew the destroyed parts, a wound is likely to become an Ulcer, and this will assume the latter condition; hence the necessity of giving all the assistance possible to the vital powers, by nutritious food, and tonic and stimulating medicines.

Persons in whom, from age or other cause, the circulation has become sluggish, are those most liable to ulcerations, and that of an unhealthy kind. This may take place in any part of the body, but it most commonly occurs in the legs, which are farthest removed from the great course of circulation. *Ulcerrated Legs* are among the most difficult cases that a surgeon has to deal with: he will first insist upon perfect rest, and keeping the limb in a horizontal position as much as possible. When the Ulcer is very foul and dark looking, warm poultices will have to be applied to bring away the slough; when this is accomplished,

and there is a tolerably clean surface, discharging only pus, a simple water dressing may be sufficient for a time. Should the Ulcer improve under such treatment, this may be continued until the healing takes place. If, however, the granulations, which will begin to fill up the hollow, appear large, pale, and flabby, and not small and red, as they should do, an astringent lotion will be necessary; this may be either of the Sulphates of Copper or Zinc, or Acetate of Lead. Lotions are far better than ointment, as they are more cleanly; the rags wet with them have to be often renewed. If it is really necessary for the patient to get about, in which case the limb should be bandaged, it is, perhaps, best to keep a dressing of Zinc Ointment applied during the day, and wash the unhealthy granulations when the bandage is removed with a Nitrate of Silver, or Sulphate of Copper lotion. It is often desirable, even where rest can be taken, to use the roller bandage, which should be applied from the toes upwards in the manner directed under the head of *Bandages*. Previous to this application the wound, besides the dressing, should be covered with strips of Soap or adhesive Plaister (the former is the best), applied so as to overlap each other some distance above and below the ulcer. If Zinc Ointment does not seem to agree well, try Turner's Cerate, or the Cerate of Lead; in some cases Red Precipitate Ointment, considerably diluted, answers very well. Venice Turpentine, Resin Ointment, and other drawing and irritating applications, are sometimes recommended, but they are decidedly injurious. These are a few hints for general treatment, but individual cases present peculiarities which call for numerous modifications. The constitutional treatment will require great attention; the strength must be supported, and any tendency to inflammation must be kept down by cooling medicines. If there is great pain, so as to prevent sleep, 5 grains of Pill Soap and Opium, or of the Extract of Hyoscyamus, may be given at bed time. Sometimes an Ulcer on the leg opens into one of the large veins, and a serious loss of blood ensues: in this case the limb should be elevated above the body until the hemorrhage can be stopped by pressure and astringent applications.

In cleansing an Ulcer, too much care should not be taken to remove all the pus or matter; it is better to leave some of it on, to protect the tender surface against irritation. If the Ulcer, when bandaged, feels hot and painful, saturate the bandage with

cold water, and keep it wet for a time; a piece of oiled silk over all will prevent rapid evaporation, and greatly assist in this object. It is not always judicious to heal an Ulcer too quickly; if of long standing, it is likely to be an outlet for morbid matter, which, if retained in the system, might cause serious functional derangement, if not fatal disease, such as apoplexy.

Ulceration of the Bones sometimes occurs, causing *Necrosis* (which see), and *Bones*.

A stoppage of the menses sometimes produces a *Menstrual Ulcer*, with a secretion of bloody matter, every three weeks or a month; this must be treated by a surgeon, as should also *Syphilitic Ulcers* (see *Syphilis*), *Sinuous Ulcers*, and those caused by the penetration of bullets, and other extraneous bodies beneath the skin. Ulcers from ingrowing nails in the feet sometimes assume a painful character, and are very troublesome (see *Nails*). For *Uicerated Sore Throat*, see *Throat*, and for other kinds of Ulcers, *Carbuncle*, *Varicose Veins*, &c.

ULMUS CAMPESTRIS. The botanical name of the *Elm* (which see). From this, as well as from the oak, chestnut, and some other trees, exudes spontaneously a peculiar substance, which has been called *Ulmic*; this, according to Berzelius, is a constituent of most kinds of bark; Boullay called it *Ulmic Acid*. Very similar to it is the black matter deposited during the decomposition of Prussic Acid, and called *Azalmic Acid*.

ULNA (Greek *olene*, the cubit). The large bone of the fore arm, so named from its often being used as a measure, under the term *ell*.

UMBILICUS (Latin for the *navel*). Hence *Umbilical Cord*, the naval string, and *Umbilical Region*, that part of the abdomen which includes the *Naval*, which see; also *Hernia*, *Infant*, *Trusses*, &c.

UNCIFORM OS (Latin *uncus*, a hook, *forma*, likeness). A bone of the carpus, or wrist, so named from its hook-like process.

UNGUENTUM (Latin for *Ointment*, which see). A popular name for the strong mercurial ointment is *Unguentum*, often corrupted into *Anguintum*, which latter term is also sometimes applied to *White Lead ointment*. See *Lead*.

UNGUIS (Latin for a *finger nail*). Applied to a collection of pus in the eye, when the abscess assumes a shape like that of a finger nail. See *Eyc*.

UREA. This is a soluble crystalline substance obtained from the urine of men and animals. It has been much employed in continental practice, and is said to increase the secretion of urine in dropsy and anasar-

chal disorders, without producing disturbance of the animal economy. Dose, 10 grains to 30, three times a day.

URETER (Greek *ouron*, urine). The membranous canal which transmits the urine from the kidneys into the bladder.

URETHRA. The canal through which the urine passes from the neck of the bladder to the Glans Penis: it is divided into three portions, viz., 1st, the *prostrate*, which is from 15 to 18 lines in length; 2nd, the *membranous*, from 8 to 10 lines long, united beneath to the rectum, and above approaching to the symphysis pubis, to which it is braced by muscular fibres, called *compressor urethræ*; 3rd, the *Spongy portion*, commencing behind, by the bulb of the urethra, and expanding in front to form the Glans Penis.

Strictures of the Urethra are often the result of syphilitic disease; they are either *Permanent*, *Mixed*, or *Spasmodic*; the first arising from an alteration in the structure of the part; the second consisting of the first, with a spasm; and the third arising from local irritation, caused by a bougie, &c. See *Strictures*.

URINE. The fluid secreted by the kidneys, consisting of water, holding solutions of certain animal principles, and a proportion of saline constituents. The chief and most characteristic ingredient is a peculiar principle called *urea*, which is supposed to be the result of the action of the kidneys upon some of the constituents of the blood, probably, as Dr. Prout suggests, from its albuminous matter; when the secretion of the kidneys is suppressed, this urea remains and accumulates in the system, on which it acts as a poison, causing eruptions of the skin, functional derangements, and sometimes symptoms as of narcotic poisoning. With some the theory is that this Urea is a product formed by the used-up tissues of the body; about $\frac{1}{2}$ an ounce on an average is excreted in the Urine of an adult in 24 hours; where there is rapid emaciation, the proportion is much larger, which favours such a supposition. Uric or Lythic acid is another peculiar constituent of Urine; when in excess, it is deposited in the bladder, constituting the sand or gravel with which so many persons are affected. (See *Calculus*, *Gravel*). In combination with Ammonia, the Urea forms Lithate or Urate of Ammonia.

The ancients believed that the Urine was a kind of extract of animal substances, a true lixivium, wherein everything infused in the animal economy was washed away; hence they called it *Lotium*. And true it

is, that we find in the Urine a great deal of what we may well consider to be waste or refuse animal matter, besides various earthy salts, such as lime, magnesia, and soda, all of which are derivable from the blood; with these are combined muriatic, phosphoric, and sulphuric acids. A healthy man secretes in the 24 hours from 35 to 40 ounces of Urine, containing, it may be, from 600 to 700 grains of solid matter; all of which, with the fluid itself, seems to be excreta from the blood, effete matter, which if not withdrawn from the circulation, would render it unfit for vital purposes. This, then, is the office of the kidneys, to abstract from the blood that which has served its purpose in the animal economy, and whose rejection is necessary to healthful existence.

The Urine of a healthy man will be of about the specific gravity of 1.018, unless there is some obvious cause of variation; it will be of a pale straw colour, quite transparent when fresh and warm, and but a little cloudy at the bottom of the vessel when cool; in warm climates, or in hot weather here, the gravity is increased, because so much fluid passes off by perspiration, that the Urine is secreted more from solids. Again, nervous individuals of both sexes, and especially hysterical females, often pass large quantities of pale Urine of a low specific gravity; with them perspiration is, to a great extent, checked, and therefore the urinary secretion is chiefly from fluids.

The chief urinary affections are, 1, *Incontinence of Urine*, which is the involuntary flow of the Urine out of the bladder; 2, *Retention of Urine*, an inability, total or partial, to expel the Urine contained in the bladder; 3, *Suppression of Urine*, which is owing to some defect in the secreting power of the kidneys; 4, *Urinary Abscess*, which is an extravasation of Urine, which may be in three different stages; either the fluid is collected in a particular pouch or cavity, or it may be widely diffused in the cellular membrane, or it may present itself in a purulent form, after having excited inflammation and suppuration in the parts among which it is situated.

For treatment in these cases, and others in which the urinary organs and secretion are involved, (see the above heads, and also *Bladder*, *Kidneys*, *Strangury*, &c., &c.).

To medicines which promote a discharge of Urine, the name *Uretics* has been applied; such are Spirits of Nitre, Turpentine, and all those coming under the denomination of *Diuretics* (which see). To the elastic bladders, or bottles, worn by those afflicted with incontinence, the name *Uri-*

nals has been given; they may be had made of India-rubber and other collapsible materials, and adjusted to the parts, so as to cause but little inconvenience to the wearer. An instrument used for testing the specific gravity of Urine is called a *Urinometer*.

UROPLANIA. Wandering or erratic urine. An affection in which the urine is diverted from its proper course, and conveyed to the salivary glands, the stomach, the ventricles of the brain, or other cavities of the body (see *Urine*).

URTICARIA (Latin *urtica*, a nettle). Nettle rash, characterised by blains or wheals, similar to those caused by the sting of the nettle: they are divided into six species—*U. febrilis*, febrile; *U. evanida*, evanescent; *U. perstans*, stationary; *U. conferta*, confluent; *U. subcutanea*, sub-cutaneous; *U. tuberosa*, Tumid Nettle Rash (which see).

The itching or burning sensation which accompanies Nettle Rash and some other diseases is called *Uredo*.

The act of whipping a palsied or benumbed limb with nettles, for the purpose of restoring its feeling, is called *Urtication*.

UTERUS (Greek *utera*, the womb). From this root we have the term *Utero-Gestation*. See *Pregnancy*, also *Womb*.

UVA, Latin for a grape: hence the term *Uva passa*, a dried grape, or *Raisin* (which see).

UVA URSI. The *Arctostaphylos Uva Ursi* of the natural order *Ericaceæ*, a low trailing shrub found in all mountainous districts of the northern hemisphere, both of the Old and New World: the leaves are used medicinally as an astringent, tonic, and diuretic; their more particular action appears to be on the urinary organs; they are especially rich in tannic acid, containing about 36 per cent.; they are chiefly given in chronic inflammation of the bladder, and have to be continued for a considerable time. This medicine is sometimes prescribed in combination with Hyoscyamus, in which combination it is found serviceable in cases of irritation from the presence of calculi in the bladder. The dose of the Powdered Leaves is from 1 scruple to 1 drachm every three or four hours; of the Extract from 5 to 10 grains, as a tonic; of the Decoction from 1 to 2 ounces. This is made by boiling 1 ounce of the leaves in 1½ pint of water till it is reduced to a pint. Dr. Copeland orders an Infusion of this plant with astringents in bronchitis, laryngitis, &c.

UVULA (diminutive of *ura*). The pendulous body which hangs down from the middle of the soft palate. It is subject to

several kinds of enlargement, in which it becomes both longer and more bulky than natural, or is simply elongated. Under these diseased conditions, it becomes troublesome in deglutition, as well as in speaking; it causes a disagreeable tickling at the root of the tongue, with an inclination to retch, and an irritating and annoying cough. When things have reached this pass, medicines are often of no avail, and the only resource is to remove a portion of the uvula, which must be done by a surgeon. Before, however, excision is resorted to, and indeed before the Uvula increases so much as to render this necessary, astringent gargles and applications should be tried, similar to those recommended for enlarged Tonsils (which see).

A small tubercle situated on the neck of the bladder is called *Uvula vesicæ*.

VACCINATION (Latin *vacca*, a cow). Under the heads of *Cow Pock* and *Inoculation* we have already made some remarks upon this subject; a few more observations will be necessary to elucidate it sufficiently for our present purpose. Assured of the manifest advantages conferred on mankind by Dr. Jenner's discovery, the legislature of this country has wisely enacted that every child shall be vaccinated within three months from its birth, and duly qualified persons are appointed in every locality to perform this duty, usually they are the medical officers of the Poor Law Unions, who have a certain fee for each Vaccination, so that any poor person who takes her child can have it done gratuitously. In the minds of many of the lower classes there is a great prejudice against this operation, and they will often risk the legal punishment, due to them for evading the law, rather than submit their children to it; but if they were better informed, they would not so act. There can be no doubt of the comparatively innoxious character of cow pock, and that it does protect the system, to a very great extent, against the infection of small-pox, is equally certain. Those who do take the latter, after a successful inoculation with the former, always have it in a less aggravated form, than those who have not been thus protected; we say always, for the exceptions to this rule are, indeed, very few. The several circumstances necessary to observe the full benefit of Vaccination are these: 1st, The subject must be quite free from fever, or any eruptive disease; 2d, The lymph employed must be taken from common cow pock vesicle which is going through its regular distinctive stages; 3d, The lymph must be taken at the right

period, that is, between the fifth and tenth days; after the latter time, the lymph becomes so changed in its character, as to become useless, if not absolutely noxious. It sometimes happens that sufficient attention is not paid to this condition, hence there is either a failure, or it results in producing eruptive disease in the child, and strengthening of the prejudice before alluded to in the parents.

It is always best to Vaccinate with virus taken fresh from the arm; but if this cannot be done, small ivory points may be dipped in the pustule, and the matter suffered to dry on them; or some of the virus may be kept between two pieces of glass; both this and the points require to be kept excluded from the air; the latter had better be put into a small, well-corked, or stopped bottle.

Sometimes the scabs which come from the vesicle are preserved in a well-stopped phial, but there is great uncertainty about the action of the virus taken from them. For vaccinating, the surgeon having covered his lancets with virus, makes a slight puncture in the upper part of the arm of the child, just sufficient to draw a very little blood; he then, by moving his lancet backwards and forwards, clears it of virus, which he leaves in the puncture, from thence it is taken up by the absorbents, and conveyed into the circulation, through which it acts on the whole system. If ivory points have to be used, with the virus dried on them, one of them must be inserted into each puncture made by the lancet, and in like manner moved about until it is cleared. When the dried virus is taken from a scab or piece of glass, a drop or two of water will require to be added to the virus to moisten it, so that it can be taken up on the points of the lancets. Should the operation have been successful, small red spots will appear on the arm round about where it was punctured, on the second or third day; these become gradually larger, and on or about the fifth day, circular vesicles are formed; they at first are of a pearly colour, being nearly filled with a transparent fluid which is contained in small cells. On the sixth or seventh days, the vesicles, which have still gone on increasing, become somewhat depressed in the centre. On or about the eighth day they have gained their full magnitude. In the course of a few hours from this a rose-coloured margin begins to be perceived; this is called the *Areola* (which see); it spreads to a considerable distance during the ninth and tenth days, when the part is tender and painful from the

thinness of the skin. Then the colour deepens to a purple; then fades, leaving the vesicle broad, and surrounded with a kind of brown crust; this changes to black, which is detached or falls off, about the twentieth day, leaving a cicatrix, which should be of moderate size, slightly depressed, and marked with indentations and radiations, corresponding, it is presumed, to the cells of the vesicles. Until about the eighth day after Vaccination, no constitutional effects are observed; then a slight fever sets in, which may, perhaps, last two or three days; this is satisfactory, as indicating that the virus has thoroughly affected the system; this, which is analogous to the secondary fever of small-pox, is often so trifling as scarcely to be noticed.

The general health of children is but slightly affected as a rule, although the extent of the areola and abundant formation of lymph shows that the desired effect is produced; it sometimes happens that a papulous eruption comes out on the body of a child after Vaccination, causing great alarm to the parents, who fear an attack of small-pox; but this is merely an evidence of fulness of habit and delicacy of skin; and that the cow-pock has taken strong hold of the system. It is advisable to give the child some slight aperient on about the twelfth or fourteenth day after Vaccination, and to repeat it two or three times, at intervals of a couple of days or so. Rhubarb and Magnesia will do as well as anything.

It is usual in performing this operation to make three punctures in the arm, at such a distance from each other that the vesicles are not likely to run together; frequently not more than two, sometimes one of these, will become a vesicle, and produce lymph; it is said to be very rare for a patient to enter the Small Pox Hospital in London, who has been Vaccinated, with more than one cicatrix in the arm, showing that it requires more than this to impregnate the system sufficiently with the Vaccine disease. To ascertain whether this has been effectually done, it has been suggested that a second Vaccination should be performed, on about the fifth day after the first, when, if the constitution has been sufficiently affected, a second vesicle will arise which will present much the same appearances as the first, but will go through its changes more quickly, so as to be at its height at the same time as the one previously formed.

VACCINE MATTER. Is generally procured by puncturing the pustule about the ninth or tenth day, and drying the virus which

exudes on bone points or pieces of glass; these may be sent to any distance if properly protected from injury; it is best to keep the points in a bottle closely sealed. When required for use they should be moistened with a little water. It is best not to trust to matter which has been kept long. Some which is fresh and good can always be obtained through the post from the National Vaccine Establishment, London, free of charge, except the postage.

VAGINA (Latin for a sheath.) The name given to the canal leading to the exterior orifice of the uterus or womb. See *Generation*.

VALERIAN. The root of the *Valeriana Officinalis*, of the natural order *Valerianaceæ*, is used medicinally on account of its antispasmodic properties; it has a strong and peculiar odour, to most persons extremely unpleasant, but to cats very attractive, and even, it is said, intoxicating. Its



action is chiefly upon the nervous centres, and it is found useful in dyspnœa, dyspepsia, epilepsy, hysteria, and neuralgia; it also acts as a vermifuge. Its medicinal properties are due to a peculiar volatile oil, which contains Valerianic acid. Various *Valerianates* are formed by this acid, combining its peculiar antispasmodic properties with those of the bases with which it is united; thus we have Valerianate of Quinine, of Iron, Zinc, &c.

The dose of Powdered Valerian Root is from $\frac{1}{2}$, to a drachm; of the Infusion, from 1

to 2 ounces; of the Simple and Compound Tinctures, from 1 to 2 drachms.

The small-flowered Marsh Valerian (*V. Palustris*) possesses the properties of the



above species, but in an inferior degree: it is found in most boggy places.

VALETUDINARIAN (Latin *valetudo*, health). One who is weakly, sickly, or out of *Health* (which see), and *Sickness*.

VALLEY (Latin *vallis*). The name of a depression of the cerebellum, in which is lodged the commencement of the spinal marrow.

VALVE (Latin *valva*, folding door). A close lid affixed to a tube or opening in some vessel by means of a hinge, or other moveable joint, and which can be opened only in one direction: hence a valve is a membrane which prevents the return of fluid in the blood vessels and absorbents; a mechanical agent connected with the circulating system. The valves of the Heart are the *Eustacian*, the *Tricuspid*, and the *Mitral*; those of the Aorta are three in number, termed from their shape *Sigmoid*, or *Semilunar*; those of the Pulmonary Artery are also three, similarly named to the above; those of the veins are, like the two last, half-moon shaped folds of the inner membrane: they are somewhat numerous, occurring in the veins of the head, trunk, and limbs; they are single, in fours, or sometimes three together. See *Arteries*, *Heart*, *Veins*.

VALVULA (diminutive of valve). The name of a lamina which ascends behind the tubercula quadragemina, towards the cerebellum; and *Valvulae conniventes*, the

name of the numerous folds observed upon the inner surface of the mucous membrane of the duodenum.

VANILLA. The fruit of the *Vanilla Aromatica*, or *V. Planifolia*, a parasitical plant, a native of South America and the West Indies. This fruit has a strong, peculiar, and agreeable odour, a warm aromatic, and sweetish taste; it appears to contain benzoic acid. It is used by perfumers, rectifiers, and distillers, but is principally employed in flavouring sherbets, pastry, creams, and other dishes of the kind, but chiefly chocolate, to which it imparts sweetness and a delicate flavour; it is said to assist the digestion, and to restore the impaired gastric forces; thus it strengthens the stomach, intestines, and heart, gives vigour and activity to the brain and the mental powers; therefore it is recommended to dyspeptic and hypochondriacal persons.

Vanilla Claviculata, a native of the West Indies, possessing a bitter taste and agreeable odour, is employed by the natives as an anti-syphilitic, and the juice as a vulnerary.

VAPOUR (Latin *vapor*, probably from a verb signifying to depart or fly off). Any liquid expanded into an elastic or gaseous fluid by means of heat; it differs from gas in its want of permanency, for it returns to a fluid state when exposed to a diminished temperature. The process of drawing off moisture by means of heat is termed *Evaporation*. Hypochondriacal maladies, melancholy, spleen, &c., are sometimes called *Vapours*, as are fogs and emanations from most marshy places.

The application of steam or vapour to the body in a close place, as well as the apparatus by which this is effected, is termed a *Vapour Bath*. See *Baths*, also *Inhalation*.

VAREC. The French name for burnt sea weed. See *Kelp*.

VAREX (Latin *varius*, unequal), a kind of knotty, unequal, dark-coloured swelling, arising from a morbid dilation of veins, or as it is called a *varicose* condition thereof; it is marked by an uneven tumour in the vein which distinctly pulsates; see *Veins*.

VARICELLA (Latin *varius*, changeable). The scientific name for *Chicken Pock* (which see). It was formerly described under the name of *crystalli*, from the white shining appearance of the vesicles; the species are *V. lentiformis*, *V. coniformis*, and *V. globularis*; Lenticular, Conoidal, and Globular Varicella, the latter being sometimes called *Hives*.

VARIOCELE (Latin *varcx*, a distended

vein, and Greek *kele*, a tumour). An enlargement and distension of the blood vessels of the scrotum; a varicose enlargement of the spermatic veins is called *Cirsocele* (which see).

VARIOLA (Latin *varius*). An eruption of pustules which suppurate from the eighth to the tenth day, commonly called *Small Pox*, (which see). This term is sometimes understood to include Cow-Pox and Chicken Pox also. Diseases which resemble Variola are termed *Varioloid Diseases*.

VARUS (Latin for a *speck*, or *spot*). A pimply eruption, of which there are two varieties, viz., *V. simplex*, and *V. punctatus*, the first being simple pimple, with a broad base, bright red colour, and solid; the second is sometimes called maggot pimple; it is tipped with a black spot, and discharges, on pressure, a grub-like concretion of mucus, like a maggot, if it be not really one, as some believe; see *Sebaceous*.

VAS (Latin for a vessel, plural *vasa*) hence we have *Vas deferens* the large excretory duct of the testes, *Vasa brevia*, short branches passing from the division of the splenic artery, and distributed to the large extremities of the stomach; *Vasa inferentia*, absorbent vessels which convey fluids into the glands. *Vasa efferentia*, absorbent vessels which convey fluids away from the glands towards the thoracic duct. *Vasa seminalia*, very minute tubes, constituting the parenchyma of the testes. *Vasa vasorum*, very minute nutrient vessels, which supply the arteries and veins. *Vasa præparantia*, a term applied by old physiologists to the corpus pyramidale, and the spermatic artery, from their tortuosity and tendril-like form; they supposed that the blood here began to be changed into semen. *Vasa vorticosa*, the external vessels of the choroid membrane, which are very numerous, and being disposed like stars, have been so named.

VASCULAR SYSTEM (Latin *vascularis*, from *vas*, a vessel). That part of the animal economy which relates to the vessels, such as the *Arteries*, *Lymphatics*, *Veins* (which see).

VEAL. This is an indigestible meat, which if eaten at all by invalids, should be hashed or stewed: the broth made from it, owing to the quantity of gelatine which it contains, is well adapted to the purposes of nutrition, and suits weak stomachs remarkably well, if it be freed from fat, thickened with pearl barley, and flavoured with a little lemon peel, it makes a most agreeable and strengthening kind of food. As generally taken, roasted, with a quantity

of melted butter, it is suited only for the strongest and healthiest persons, scarcely, indeed, for them. An eruption of spots, giving a veal-like appearance to the skin, is termed *veal skin*. See *Skin Diseases*, *Vitiligo*.

VEGETABLES. Some there are who contend that these should constitute man's only diet; but we have not yet seen sufficient grounds for the adoption of such an opinion; on the contrary, it seems to us that the human system can scarcely be properly built up and nourished without a due supply of animal food, and that man was meant to eat this kind of food appears plain from the structure of his teeth, and the instinctive desire which he has for it.

By the term Vegetables, we generally understand those edible products of vegetation which are not comprised under bread, corn, nor fruits; they are useful for the large quantity of saline ingredients which they contain, and many of them are extremely nutritious, but by weak stomachs they are not so easily digested, as properly cooked tender meat, and bread, which articles of diet more nearly resemble the composition of the human body, and therefore require a less complicated process of digestion and assimilation than Vegetables, for whose particular qualities see such heads as *Cabbage*, *Potatoe*, *Turnip*, &c.

VEINS. These are the vessels which return the blood to the auricles of the heart, after it has been circulated by the arteries through the various tissues of the body. They are much thinner in substance than the arteries, so that when emptied of their blood, they are flattened and collapsed. Under the head of *Circulation* we have already explained the difference between the offices performed by the *systemic* and the *pulmonary* Veins, the former of which convey the dark-coloured and impure, or *venous* blood, from the capillary system to the right auricle of the heart; and the latter transmit the vital blood, after it has been oxygenated by contact with air, in the lungs, from thence to the left auricle of the Heart (which see).

Arteries, then, we may understand, are the channels through which blood passes from the heart to the various parts of the body; Veins, those by which it returns to that organ, and to the lungs, to be purified, and again rendered fit for its vital purposes. These two different channels of circulation do not communicate directly with each other, but are connected by the minute branches which they each throw out, and which are called *Capillaries* (which see);

these ramify all through the extremities, and all over the surfaces of the body, conveying arterial, and taking up venous blood, which is passed into the smaller veins, thence into the larger, and so proceeds upward to the great fountain from which it set out, constantly receiving fresh accessions from the tributary Veins which pour into the main channels on every side. Thus, as Wilson tells us, "The Veins commence by minute radicles in the capillaries, which are everywhere distributed through the texture of the body, and converge to constitute larger and larger branches, till they communicate in the main trunks which convey the venous blood directly to the heart. In diameter they are larger than the arteries, and, like these vessels, their combined area would constitute a hollow cone, whereof the apex is placed at the heart, and the base at the surface of the body." It follows from this arrangement that the blood, on returning to the heart, is passing from a larger to a smaller channel, and therefore that it increases in rapidity during its course. Veins admit of a threefold division, into Superficial, Deep, and Sinuses.

Superficial Veins return the blood from the integument and superficial structures, and take their course between the layers of the upper fascia. They then pierce the deep fascia, in the most convenient and protected situation, and terminate in the

Deep Veins, which are situated among the deeper structures of the body, and generally in close proximity with arteries: in the limbs they are enclosed in the same sheath with these vessels; these return the blood from the capillaries of the deep tissues.

Sinuses differ from these Veins in their structure, and also in their mode of distribution, being confined to special organs, and situated within their substances. The principal venous sinuses are those of the dura mater, diploe, cancellus structure of bones, and uterus.

Veins, like arteries, are composed of three coats, external, middle, and internal. The *external coat* is the thickest, increasing in degree from the smallest to the largest one, the former gradually diminishing until it is lost altogether, and nothing remains but the one coat in the capillary. In the *middle*, or *contractile coat*, which is thinner but finer than the outer, the chief remarkable feature is the presence of longitudinal as well as transverse fibres, the former consisting of closely reticulated elastic tissue, occurring in layers, and alternating with the circular layers, composed of smooth,

muscular fibres, interspersed with areolar tissue, and fine elastic fibres. The *internal coat*, stronger than that of the arteries, is composed of an epithelium and an elastic membrane, between which is situated a striated nuclear lamella.

These membranes and tissues undergo considerable changes and modifications, in accordance with the size and necessary strength of the Veins, which more frequently communicate with each other than do the arteries; these unions are called *inosculations*, and their object is evidently to obviate the obstructions to which Veins are particularly liable, from the thinness of their coats, and their inability to overcome much impediment by the force of their current.

One very remarkable feature of Veins is their numerous *valves*, which are composed of a thin stratum of nucleated areolar tissue mingled with fine elastic fibres, and coated on the two surfaces with fine elongated cells; the segments, or flaps, of these valves are semi-lunar in form, and arranged in pairs, one on either side of the vessel generally, but sometimes there is a single flap which has a spiral direction, and occasionally there are three. The free border of the valvular flaps is concave, and directly forwards, so that while the current of blood is permitted to flow freely towards the heart, the valves are distended and the current intercepted, if the stream from fulness of the Veins above, or other causes, should turn back. When we consider that the course of the venous current is upward, and so opposed to the law of gravitation, we shall see at once the wisdom of such an arrangement. At Vol. I., p. 363, will be found a cut of a valve of the heart, which will give a good idea of the general conformation of those of the Veins; in those of the extremities, particularly the deeper ones, they are most numerous; in the portal and cerebral, and very small veins, and those of the viscera, they are generally absent, and altogether so in the large trunks.

Our readers may now perhaps understand why in *Bleeding* (which see) a bandage is tied round the arm *above* the spot where the Vein is to be opened. Were the flow of venous blood downward from the heart, this would to a certain extent prevent its reaching the point of egress; but being upward, the obstruction above that point, arrests and causes it to seek an outlet, which it finds in the opening made by the lancet; it also gives greater prominence to the Vein, and renders it more obvious to the operator. We may learn from this that, in order to arrest the flow of blood from an artery, we must apply

pressure between the bleeding point and the heart, or trunk of the body; to arrest the flow from a Vein the reverse must be done. We may distinguish the venous from the arterial blood, by the dark colour, and even flow of the former, and the bright red tint, and jerking mode of egress, of the latter. The artery pulsates; the Vein does not (see *Arteries*).

The Latin for Vein is *Vena*: hence the designations applied to the principal ones, such as *Vena Cava Superior*, or *Descendens*, and *V. C. Inferior* or *Ascendens*, the grand trunk which transmits the blood from the head, neck, upper extremities, and part of the thorax to the heart; and that which extends from the articulation of the 4th and 5th lumbar vertebræ to the right auricle of that organ; *V. Portæ*, the large trunk which extends along the groove of the liver; and *V. Arteriosa*, the Portal Vein, so called because it ramifies like an artery, and conveys blood for secretion; also *V. Basilica*, the Royal, or large Vein of the arm, and *V. Median*, a branch of which is generally opened in *Venesection*, or *Bleeding*. It would answer no good end to particularize more of the greater or lesser members of the venous system; they are, as may be supposed, very numerous.

Inflammation of the Veins is one of the most dangerous affections with which the surgeon has to contend; it may be caused by a wound, or by the inflammation spreading from the subjacent tissues; in this we have a red and angry appearance of the part about the vessel, which is hard and painful. The application of warm fomentations, with constitutional treatment, as recommended under the head *Inflammation*, must be the mode of procedure in this case, which should be placed as soon as possible under the care of a medical man.

Varicose Veins are not uncommon in the legs of stout elderly females, and may be met with in those of all ages, and both sexes. In this affection there is enlargement of the vessels, which stand out from the surface of the limb, like cords, like which too, they often assume a knotted appearance. This affection may be attributed to obliteration, or deficient action of the valves of the Veins of the leg, or some other cause of obstruction of the flow of blood upward, through those of the abdomen. Pregnancy, habitual costiveness, liver disease, abdominal tumours, may be all mentioned as exciting causes. The pressure of a truss, or belt also, or of garters too tightly tied, may bring on this varicose condition of the Veins, especially in persons whose occupation necessitates

much standing. Great care should be taken to avoid a scratch, or contusion of the swollen part, or a wound may be produced, which is likely to result in an ulcer very difficult to heal. The part should be supported and protected by a bandage, or elastic stocking; if the former, it should be very carefully and evenly applied, as described under the head *Bandages* (see vol. I., p. 76), but a well fitting stocking of elastic web is the best and most convenient.

VELUM (Latin for a Veil). Hence *V. interpositum* and *V. palati*; the 1st being a vascular membrane which connects the choroid plexuses of the brain; and the 2nd, the partition which separates the mouth from the palate; it is commonly called the soft *Palate* (which see).

VENEREAL DISEASE. See *Syphilis*, &c.

VENISON. The flesh of the deer. This, like that of other wild and hunted animals, is easy of digestion; and there can be little doubt that the practice of letting it hang a long time before cooking renders it more so. According to Dr. Beaumont, who compiled a table of the digestibility of various articles of food, Venison steak occupies one hour and thirty-five minutes in the process of digestion, while beef-steak requires three hours.

VENTRICLE (Latin dim. of *ventor*, the stomach. A term applied, 1st, to four cavities of the *Brain*; 2nd, to two cavities of the *Heart* (which also see), and *Circulation*.

VENTRILOQUISM (Latin *ventor* and *loquor* to speak). Speaking as it were from the stomach; that the Ventriloquist really did this, and not, as is the fact, from the throat, the ancients appear to have believed. The art is said to consist in first drawing a long breath, so as to fill the lungs with air, and then employing, during expiration, such organs of voice as can be moved with as little movement of the lips, mouth, and cheeks, as is compatible with the pronunciation of certain words or sounds.

VERATRIA. The alkaloid discovered in the *Veratrum Album* or White Hellebore (which see); also in *Sabadilla* (which also see). In the Meadow Saffron (*Colchicum Autumnale*) this substance appears also to exist in combination with gallic acid.

Veratria is a deadly poison; it acts as an emetic and purgative, and is sometimes given in rheumatism, and as a stomachic in nervous affections, in doses of from $\frac{1}{12}$ to $\frac{1}{6}$ of a grain. It is, however, chiefly employed as an external irritant in neuralgic and rheumatic affections; the form of application being a liniment or ointment; 2 grains to 1 drachm of Aromatic Spirit of Ammonia,

and $1\frac{1}{2}$ ounces each of Spirit of Camphor and Soap Liniment, is a good form for the former; and 4 grains, dissolved in about 6 drops of alcohol, and rubbed down with $\frac{1}{2}$ an ounce of Lard, for the latter. This has been found serviceable in sciatica, rubbed in every night with a horsehair glove, until tingling is produced. See *Hellebore*.

VERDIGRIS (French *verde* green, and *gris* grey); applied, on account of its peculiar greyish green colour, to the Diacetate of Copper, which is much used as a pigment in several processes of the chemical arts, although rarely in medicine. Like all preparations of copper, it is highly poisonous. It is this which forms on the surfaces of utensils made of this metal, when exposed to the action of any acids, and renders them, in cookery, very dangerous, without extreme care. See *Copper*.

VERJUICE (French *verjus*, literally green juice). An acid liquor, obtained from crab apples, sour grapes, &c., used in sauces, ragouts, &c.; and also in astringent poultices; for the latter purpose, it is not superior to common *Vinegar*, (which see), or to acetic, or pyroligneous acid.

VERMES (Latin for a worm). From this term we have *Vermicelli* a kind of wheaten paste, manufactured in Italy, in the form of long slender tubes, or threads, and so named on account of its worm-like appearance; it is like maccaroni in substance, the only difference being that the latter is made into larger tubes. Both of them are prepared in the greatest perfection in Naples, where they form the principal food of the inhabitants. They are used in this country for thickening soups and made dishes, and are served up with cheese and seasoning; they are only unwholesome in so far as the cheese or butter make them so. *Vermiform* (wormlike) is a term applied to two processes of the brain. *Vermifuge* that which expels *Worms* (which see, and *Anthelmintics*). Infestation of the skin by parasitic animalcules is called *Vermination*.

VERONICA or **SPEEDWELL.** This, one of the commonest and prettiest of the wild plants of Britain, is the *Veronica Officinalis* of botanists (fig. 1) belonging to the natural order *Scrophulariaceæ*; its leaves have a slightly bitter, warm, and astringent taste; they are supposed to contain tannin, and have the reputation of being sudorific, diuretic, tonic, stomachic, and expectorant; they are, however, not often used medicinally. In Sweden and parts of Germany they have been taken as a substitute for tea. Several plants of this genus enjoyed a good reputation for the cure of diseases in former

times; among them was the Ivy-leaved in our corn fields, and is sometimes termed Ivy-leaved Chickweed.



Fig. 1.

Speedwell, here figured (fig. 2). Botanists



Fig. 2.

call it *Veronica Hederæfolia*; it is common

in our corn fields, and is sometimes termed Ivy-leaved Chickweed.

VERRUCA (Latin for a *Wart*, which see).

VERTEBRA (Latin *verto*, to turn). A bone of the spine, so named from its turning upon the adjoining one. See *Spine*.

VERTIGO (Latin *vertix*, or *vortex*, a whirlpool). Dizziness, or a fear of falling. See *Giddiness*.

VERU MONTANUM (Latin for a little eminence). Applied to such in the urethra, at the termination of the *ductus ejaculatorius*: it is sometimes called *Caput Gallinaginis*, or the Woodcock's head. See *Urethra*.

VERVAIN. The *Verbena Officinalis*, of the natural order *Verbenaceæ*, a common wild plant in this country; once held in high reputation for medical, and even magical virtues, to which honour it has little real claim; it is feebly astringent, and is sometimes used to make a collyrium, said to be useful in infantile ophthalmia.

VESANIA (a Latin term for madness). Applied by Cullen to an order of cases in which the judgment is impaired without stupor or fever. See *Madness*, &c.

VESICA (Latin for a bladder). A blister or elevation of the scarf skin, containing clear fluid. Several eruptive diseases are of this form; glass pock is so, and cow pock in its first stage, afterwards it becomes pustular. From this root we have *Vesicula*, a little bladder, applied to the *vesiculæ seminales*, two small reservoirs situated beneath the bladder, which secrete a peculiar fluid; and *Vesicles of Naboth*, a name given to the follicles in the interior of the *cervix uteri*, which sometimes become transparent, and filled with viscous fluid.

VESICATORIUM, or *Vesicatory*, is a blister or epispastic, produced by an external application. According to Dr. Paris, it acts, 1st, as a *derivative*, by producing a derivation of the circulation from the inflamed and congested vessels of the neighbouring organs to the blistering surface; 2nd, as an *evacuant*, by occasioning an effusion of fluids, at first serous, then purulent; 3rd, as a *general stimulant*, by raising the vigour of the circulation; 4th, as an *antispasmodic*, by relieving pain through the medium of continuous sympathy. See *Blister*.

VESTIBULE (Latin *vestibulum*, a threshold). A cavity of the internal ear, so named from its forming an entry to the cochlea and semicircular canal. See *Ear*.

VIABILITY (Latin *vivo*, to live). The state of a child that is *viable*, or likely to live. This is a term adopted from the French, and applied to a new-born infant to express its capability of sustaining an in-

dependent existence. Hence, when a foetus is sufficiently developed to live, it is said to be *viable*.

VIBEX (Latin, plural *vibices*), applied to the large purple spots which appear under the skin in certain malignant diseases.

VIBRISSA (Latin *vibro*, to quiver). The hair which grows in the nostrils; see *Hair*.

VIDIUS. The name of a French Medical Professor who was physician to Francis 1st, and in compliment to whom the terms *Videan* has been applied; 1st, to the *foramen pterygoideum*, a small hole in the petrous portion of the temporal bone; 2nd, the pterygoid artery; 3rd, a portion of the fifth pair of nerves.

VIGANI'S ELIXIR, an old name for the sweet Elixir of Vitriol, or *Spiritus Etherus Aromaticus*.

VILLUS (Latin for a soft hair). Hence, in anatomy, the *Villi* are small fibres, resembling a covering of down, or the pile of velvet, which are seen in the internal coat of the intestinal canal; this is called the *villosus* coat of the intestines; these *villosities* as they termed, are continually covered with mucus.

VIOLET. The *Viola Odorata*, of the natural order *Violaceae*, is too well known to need any description here; its delightful

would probably be produced by the strong odour of any other flower, acting upon a morbidly excitable state of the nervous system. The Violet flowers are used medicinally on account of their demulcent and mildly laxative properties; in large doses they are emetic. The usual form of preparation is Syrup, of which from 1 to 2 drachms may be given to infants for coughs and tightness of the chest. Mixed with Almond Oil, and Syrup of Senna, it makes an excellent demulcent and aperient medicine. The root of the Violet is emetic, in doses of a drachm and upwards.

A highly poisonous alkaloid called *Violine* has been extracted from all parts of this plant; it is said to be similar to the Emetin of Ipecacuanha.

VIPER. This is the *Vipera Berus* of naturalists, the only poisonous reptile indigenous to this country; the fat of it was formerly in high repute for making ointment, and country people yet often ask at the druggists for Viper's Oil, using the olive, or any other oil which may be substituted for it, to make, combined with "Oil of Brick," and a variety of other ingredients, a linament for rheumatic affections, spasms, &c., they often find, too, that faith and friction together do wonders, but it is the fat of the reptile which has most of the credit. Country people think, too, that for the venomous bite of the Viper, or adder, as it is often called, there is nothing so good as the creature's fat rubbed over the wound; that any fatty matter rubbed gently and persistently into the bitten limb in this case is beneficial there can be no doubt; for the faintness which affects those who have met with this accident, repeated small doses of Brandy should be administered, or Sal Volatile, or some other stimulant, to rouse the system to repel the torpidity caused by the poison; mustard poultices may also be applied to the feet, calves of the legs and the spine, and warm poultices to the limbs, which will probably be much swollen, and very painful. Persons have died from the effects of a Viper bite, but this has not often happened; in the majority of cases they recover, if proper means are used.

VIRUS (Latin for poison, probably from the same root as *vir*, *vireo*, the idea being strength to overcome.) This is the term applied to the active, or contagious matter of a pustule, &c.: in the language of pathology, any matter which is the product of a disease, and is capable of producing that disease in a healthy individual by means of inoculation or absorption through the



fragrance has been said sometimes to cause convulsions, apoplexy, and even death: but this is an absurdity. That the perfume of the Violet will sometimes have a peculiar effect upon the nerves of extremely sensitive persons, and cause faintness and giddiness, there is no doubt, but this effect

cuticle, is called the *virus* of that disease, so we call the lymph which is used to inoculate for cow-pock *Vaccine virus*.

Vis (Latin for force or power). Hence we have the terms—1st, *Vis a tergo*, force from behind, applied to the force communicated from the ventricles of the heart to the blood in the arteries, capillaries, and veins; 2nd, *Vis inertiae*, inertness, or the principle of inactivity, by which a body remains in the same state of rest or motion, unless obliged to change it by some fresh impulse derived from an opposing force (see *Inertia*,); 3rd, *Vis insita*, the name given to the irritability of the muscular fibre, arising from the action of a stimulus: some have called this *Vis vitalis*, and applied the term *Vis nervea* to the energy or power or feeling (see *Irritability*); 4th, *Vis medicatrix naturæ*, a power supposed by Cullen to preside over the living body, and to possess a faculty of resisting to a certain extent the effects of disease; 5th, *Vis mortua*, that property by which a muscle contracts, after the death of the animal to which it belongs, or after having been cut from the living body; 6th, *Vis vite*, the natural power of the animal body in resisting disease and preserving life.

Viscus (Latin for a bowel or intestine). The plural of this term is *viscera*, and it is applied to the entrails or intestines, and indeed to all the organs which lie within the thorax or other cavity of the body, especially the *Stomach* (which see). Hence any diseases which affects these organs, or ought pertaining to them, is termed *Visceral*. The Mistletoe, a plant formerly supposed to be good for epilepsy, and the berries of which are made into the sticky substance called bird-lime, is known to botanists as *Viscum Album*; hence any substance which is glutinous, sticky, or adhesive is called *Viscid*, or *Viscous*; such as tar, pitch, balsams and fluid resinous gums, and the mucus which chokes the bronchial passages in some conditions of diseases.

VISUS FORMATIVUS (Latin for a formative effort). A principle similar to gravitation, applied by Blumenbach to organized matter, by virtue of which principle, every separate organ is endowed, as soon as it acquires structure, with a *vita propria*, or proper life of its own.

VISION (Latin *video*, *visus*, to see). The faculty of seeing, or the perception of external objects, as conveyed to the brain by means of the organs of *Sight* (which see, and *Eye*).

VITELLUS. Latin for the yolk of an *Egg*, (which see.)

VITILIGO (Latin *vitulus*, a calf.) An affection in which the skin presents a veal-like appearance; it consists of white, shining, smooth tubercles about the ears, neck, and face, terminating without suppuration. *Alphos*, *Leuce*, and *Meals* are varieties of the disease, which deeply affects the skin, and subjacent structures, occasioning a loss of sensibility, and ultimately of vitality in those parts. See *Skin Diseases*.

VITREOUS BODY (Latin *vitrum*, glass.) A transparent mass, resembling melted glass, occupying the globe of the eye; it is commonly called the *Vitreous Humour*.

VITRIOL (Latin *vitrum*, glass.) This term originally denoted almost every crystalline body; but it afterwards came to have a more restricted application, viz., to Sulphuric Acid, which was and is still called Oil of Vitriol, and the Sulphates of Iron, Copper, and Zinc, which are respectively called Green, Blue, and White Vitriol. The term *Vitrum* is applied to several glassy substances, such as Glass of Antimony, and in the preparation of Tartar Emetic.

VOICE (Latin *vox*.) An audible noise produced in the throat and mouth by the action of certain *vocal organs*. Most animals have the power of producing it, but few, except man, can utter *articulate* sounds, viz., those of which several conspire together, to form a system of sounds or words expressive of ideas. The infinite varieties of sounds heard in the human voice are all produced by certain modifications of movement in the vocal organs, the chief of which is the *Larynx* (which see.) This partakes of the nature both of a wind and a stringed instrument. A good musical voice depends chiefly upon the soundness and power of the organs of utterance, and of hearing, and the musical disposition, and is distinguished by clearness of intonation, ease, strength, duration, harmoniousness, and fulness of the sounds. Remarkable changes take place in the voice under some circumstances of disease; thus in decay of the lungs we have a deep hollow sound; in Asiatic cholera, a shrill treble; in croup and inflammatory affections of the bronchial passages, a hoarse kind of crow, often with a shrill reverberation; and sometimes there is an almost total loss of voice. See *Aphonia*, *Croup*, &c.

VOLATILITY (Latin *volo*, to fly). A property of bodies by which they are disposed to assume the state of vapour, or fly off. Most of the essential oils are extremely volatile; so is Camphor, which is in fact a concrete oil; and so are all strong spirits.

VOLTAIC PILE. A galvanic apparatus, consisting of plates of zinc and silver, and pieces of moistened woollen cloth, piled in regular order, thus, zinc, silver, cloth, and so on for 20 or more repetitions. See *Electricity, Galvanism*.

VOLUNTARY MOTION. See *Motion*.

VOLVULUS (Latin *volo*, to roll up). A disease produced by the passing of one portion of the intestine into another, commonly the upper into the lower part. See *Bowels, Intestines*.

VOMER (Latin for a ploughshare). A bone of the nose, forming the partition between the nostrils, and so called from its resemblance to the above-named agricultural implement. See *Nose*.

VOMICA (Latin *vomo*, to spit up). An abscess of the lungs; so called from its discharging a serous, foetid matter, termed *Sanies* (which see).

VOMITING, the act of throwing up, or attempting to throw up, the contents of the stomach; it consists of a forcible contraction of the muscles of expiration, and of these only, the glottis being closed, and the cardia opened. It was thought at one time that Vomiting depended upon a convulsive action of the stomach alone; then came the theory that the stomach was passive in the act, which was attributable to the pressure of the muscles of the belly excited to violent action; but we are now quite convinced that both these exciting causes of Vomiting operate at the same time.

Although Vomiting is generally preceded by nausea, yet this is not always the case; infants frequently relieve their stomach of an over quantity of food without showing the slightest signs of distress, which would not be the case if they *felt* sick, as well as were sick, as the phrase generally goes. In the Vomiting which not unfrequently attends coughing, sobbing, &c., there is also commonly an absence of the sensations of nausea. The causes of Vomiting are numerous: poison, medicines, indigestion, excess of bile, or mucus, in the stomach or bowels; a mechanical excitement of the muscles of the gullet, as with a feather, finger, &c.; hiccup, sobbing, laughing, the motion of a ship in the water. Anything which is repugnant and offensive to either of the senses; mental emotion; a sudden blow or shock to the system. (See *Nausea, Sickness*).

An ineffectual attempt to vomit is called *Vomituritia*. See *Retching*.

VULPIS MORBUS (Latin for fox, and death or disease.) Literally fox disease. Applied to the decay and fall of the hair,

because the fox is said to lose its hair sooner than any other quadruped. This is, of course, an erroneous notion. See *Alopina, Baldness*.

VULVA (Latin for valve.) A name given to the pubendum, or external parts of the female generative organs. A small aperture of the brain, forming the part by which the three ventricles communicate, is termed *vulva cerebri*.

WANT'S POWDER. A once popular remedy for gout and rheumatism, it consists of the powdered bulb of *Colchicum*, mixed and disguised with other inert ingredients.

WARE'S GOLDEN OINTMENT. An ointment recommended for ophthalmia and ulcers, consisting of Fresh Butter, 1 ounce rubbed down with 1 drachm of the Nitrated Oxide of Mercury; the Red Precipitate Ointment of the Pharmacopœia has precisely the same properties.

WARD'S PASTE. A popular remedy for piles, now nearly superseded by the Confection of Black Pepper of the Pharmacopœia, which is similar to it in composition. See *Pepper, Piles*.

WART. This is an excrescence from the cutis or outer skin, or a horny tumour formed upon it; it is not generally so painful as it is disagreeable and unsightly, coming nearly always upon the hands, or some other conspicuous place. The best treatment is to touch it with some caustic, or escharotic. Nitrate of Silver is the most effectual, but this turns the skin black, which is in many cases very objectionable. Caustic Potash will answer the purpose, so will Acetic Acid if of extra strength, and Nitric Acid. The application should be made daily, and the decayed part pared off, or cut with scissors. If it can be conveniently done, a ligature of silk tied tightly round the base of the wart will cause it to decay, and eventually drop off. Some of the acrid vegetable juices, such as those of *Celandine* and *Spurge*, are popularly used as a cure for warts; but the favourite method is to have them "charmed away." Without pretending to account for the marvellously quick disappearance of these troublesome excrescences, which sometimes takes place under the charming process, we must express our disbelief in its efficacy. The scientific word for a Wart is *Verruca* (which see).

WASHERWOMAN'S SCALL. A species scall which sometimes appears on the arms and wrists of washerwomen; it is occasioned by the irritation of the soap, and is scientifically termed *Psoriasis lotorum*. The best treatment is emollient applications, and

avoidance of the cause of irritation for a time.

WATER is one of the great necessities of existence, and an agent in the prevention, relief, and cure of diseases; the importance of Water can scarcely be estimated; it may be no matter of surprise, therefore, if we devote some space to an elucidation of its nature, properties, and effects upon the human system. By the old chemists, Water was regarded as a simple element, but we now know it to be a compound substance, consisting of hydrogen and oxygen, in the proportion of two volumes of the former to one of the latter gas, making it, in fact, a protoxide of hydrogen: when pure, it is transparent, colourless, inodorous, tasteless; but owing to its extensive powers as a solvent, we seldom meet with it quite so; it is generally found holding earthy matters in a state of mechanical suspension, or of chemical solution, but the nature and degree of its contamination must necessarily vary, according to circumstances and situation. These impregnations, however, are not generally sufficient to give it any very sensible taste or odour, or to render it unfit for the ordinary purposes of life. All the varieties of common water may be arranged under the three heads, Rain Water, Spring Water, River Water.

Rain Water, when collected away from the contamination of towns, and before it reaches the earth, is undoubted the purest; it has the least specific gravity of any; but collected, as it generally is, from the roofs of houses, it contains a portion of sulphate of lime, soot, and other impurities, and should always be boiled before it is taken into the human system.

Spring Water, in addition to the foreign substances above named, has generally a small portion of common salt, and frequently other salts. The larger springs are purer than the smaller ones, and those which occur in siliceous rocks, or beds of gravel, contain the least impregnations, being sometimes nearly as pure as the purest Rain Water. When it is obtained by digging to a considerable depth, as in wells, it is not so pure, being commonly distinguished by a property called *hardness*, which implies an incapacity for dissolving soap, owing to its containing lime and other earthy salts, the best mode of freeing it from which is first to boil it; then, after it has cooled, to drop into it a little Carbonate of Soda, and filter it. That hard Water has a tendency to produce disease in sheep and other animals, is an acknowledged fact; instinct teaches them to avoid it, if they can

get any other. The scrofulous swellings and gravel which prevail in some districts have been attributed, and with good reason, to the hardness of the Water there.

River Water, if the stream be rapid, and runs over a pebbly or siliceous bed, may be as pure as the softest spring Water; but when the current is slow, and the bed clayey, it approaches nearer to well Water, in its composition, and there are generally impurities added, inseparable from its exposed condition, rendering it liable to receive decaying vegetable, and other matters: in the Water of lakes and marshes there is, necessarily, much of this; it is, therefore, unfit for drinking.

With regard to the use of Water as an article of diet, we may observe:—

First, it may be taken in too large quantities to be carried off by the skin and other excretory organs, and then it remains in the system to impoverish the blood, and to reduce the amount of solid matter that is necessary for the performance of the functions of the tissues of the body. This is one of the results that sometimes take place from what is called the Water cure (see *Hydropathy*); unless persons have sufficient vigour to take the exercise necessary to throw off by the skin the Water that is taken into the stomach, serious ill effects must necessarily arise. The good that is effected by this system of the treatment of disease must be attributed more to the exercise that it renders necessary, than to the unnatural quantities of Water that are taken into the system.

Secondly, Water may not be taken in sufficient quantities to carry on the healthy functions of the system. If the food is taken too dry, it is only imperfectly digested, and many important constituents, such as the salts, are not taken into the body in sufficient quantity. A deficient quantity of Water in the blood will also prevent the healthy process of nutrition, and wasting and degeneration of the solid parts of the body will occur. It would be difficult, perhaps, to lay down any law with regard to the quantity of Water individuals should take, and, perhaps, it is safer to rely on the instincts of the body, which seem to point out how much we ought to take by the feeling of satiety that comes on after enough has been taken. We may, however, get at something like an approximation of the proportion of solids and fluids required by the system in food, by examining the composition of milk in which we find the proportion of Water to solid parts as 870 to 130 in 1000 parts, or about as 7 to 1.

Thirdly, The good effects of Water may be destroyed by the substances with which it is taken. Although the stomach has the power of separating Water from the food in which it exists, it yet often happens that the fluid articles of diet are injurious. Water itself may contain so large a quantity of saline matters, or of organic matters in a state of decomposition, as to cause serious diseases. The habitual taking of Water in the form of fermented liquors, as beer and wine, as also the admixture of distilled spirits, may cause irritation and congestion of the mucous membrane and derangement of the nervous system.

On the whole it appears that for the human system in a state of health, there is no such proper and wholesome drink as Water; that is, after the period when solid food can be taken; during infancy, of course, milk is required. Water does not tempt the appetite to indulgence in more than is necessary to quench thirst, and unless the taste is vitiated by other beverages, it is the most grateful drink that can be offered to the palate.

The Medicinal Properties of Water as a diluent, as Dr. Graham observes, are "considerable, and were well known to the ancients; and cold Water, used as a drink in fevers, was the principal remedy of Hippocrates, the father of physic, in those complaints. The temperature of 60° is the proper degree when it is intended that Water should produce its diluent effects without the aid of heat. Under 45° it produces a sedative and astringent effect; above 60°, and under 100°, it relaxes the fibres of the stomach, and is apt to induce nausea; but at a higher temperature the stimulus of heat prevents that effect. Simple Water may supersede the use of all other diluents; but animal and vegetable infusions are generally employed, or Toast-and-water, which is more agreeable to most palates, and is an excellent diluent in fevers and inflammatory diseases. The temperature of Water, as a diluent, should be regulated by the nature of the disease; in internal bleeding it should not exceed 45°, but it may be 60° in fevers, unless in the cold stage of the paroxysm, when thirst should be allayed by tepid or warm Water, or other warm fluids; and the same precaution is necessary, when the sweat has become general and profuse. In cases in which there exists a morbid increase of bile, or of the secretions of the stomach and bowels, disturbing the functions of these organs, the temperature of the Water used to drink may be from 90° to 114°; and

in some cases of indigestion, which are attended with a sensation of cold at the stomach, and with cold extremities, a cupful of Water taken hot, affords very considerable relief. Some medicines, as sudorifics, diuretics, emetics, and refrigerents, can scarcely produce their effects, unless their operation be assisted by copious dilutions of watery fluids." It was formerly the custom to deny fever patients a copious supply of Water, but the practice now is to let them drink as much as they desire; and this is the more humane, as well as beneficial plan.

The Latin for Water is *Aqua*, and under this head will be found more upon the medical uses of this element. See also *Baths and Bathing, Hydropathy. Chalybeate Waters, &c.*

WATER BRASH is a term applied to a discharge of thin watery fluid from the mouth, when the stomach is empty; it comes up about $\frac{1}{2}$ an ounce at the time, with acid eructations, but without much straining, sometimes to the extent of a pint; it is a symptom of irritable and neuralgic indigestion, or a form of *Dyspepsia* (which see), and also of some of the more malignant diseases of the stomach. Persons who take much oatmeal are peculiarly subject to this affection. Why they are so, has not yet been clearly ascertained.

Treatment. Bismuth, a full dose, will generally afford relief; if there is pain, Morphine should be also taken, or some other anodyne. After the water has ceased to flow, some stomachic should be given, with a mineral acid. A mixture like this will be best:—Infusion of Cascarella, 6 ounces; dilute Sulphuric Acid, 3 drachms; Tincture of Cardamoms, 2 drachms: take a sixth part twice a day. Attention should be paid to the action of the liver, before administering these remedies; perhaps a little mild mercurial, such as Blue Pill, or Grey Powder, had better be given in any case, about a couple of doses, combined with Rhubarb.

WATER-CURE. For an account of this mode of treating diseases, which has recently come into fashion, see *Hydropathy*.

WATER DRESSING is simply lint dipped in water—warm, tepid, or cold—as the case may require, and applied to the part affected, with a covering of oiled silk or thin gutta-percha, to prevent evaporation; it is far more pleasant and cleanly than other dressing with ointment, and in most cases of wounds, abscesses, &c., when poulticing is not required, it is found to succeed better.

WATER ON THE CHEST. This is a common term for the disease known to the profession as *Pleurisy* (which see).

WATER ON THE HEAD. The effusion of water into the ventricles of the brain, is not uncommon with children under seven years of age. It is said, in five cases out of six, to originate in stomachic and intestinal irritation; it sometimes follows whooping-cough, scarlet fever, or measles, and often proves fatal; children, whose parents are of a scrofulous habit, are especially liable to this affection; the continued irritation of teething sometimes produces it; excessive cold applied to the head, suppressed discharge of moist eruptions on the head, &c. See *Hydrocephalus*.

WATER DOCK (GREAT). This is the *Rumex Aquaticus* of botanists; a native plant, the powdered Root of which is used



as a dentrifice, and the Infusion as a wash for scorbutic gums; like the sorrels, to which it is nearly allied, it has strong antiscorbutic properties.

WATER HOREHOUND. This plant is common in Britain; it is the *Lycopus Europæus*, of the natural order *Labiata*, and has been long used as a febrifuge; the Powder, in doses of 2 drachms, is said to cure intermittents; it is also considered as an astringent. The Common Horehound, however, which grows abundantly by waysides and waste places, is more generally esteemed for its medicinal properties; it is a good tonic and excitant of the uterine system, and is employed as an emmenagogue, and against nervous affections and hysterics; it has also been prescribed in catarrhal affections of

the chest; in large doses it is aperient. See *Horehound*.



WAX (German wachs) An oily concrete matter gathered by bees from plants, for the formation of the cells wherein they store their honey. This is naturally of a yellow colour, but by a process of bleaching, it becomes white. The Latin for Wax is *Cera* (which see). It was formerly employed as an emollient in ulceration of the intestines, but is seldom now given internally. As an external agent, it forms the basis of all *cerates*, and is an important constituent of many ointments and plaisters.

WEANING. If a child has cut four teeth, if it is in good health, and its bowels are regular, it should be weaned when nine months old, and without any previous preparation. It should be fed with a spoon on food of biscuit powders, tops and bottoms, or some other farinaceous preparation, made with cow's milk. A delicate child may be kept at the breast until it is a year old, but not much beyond that. If a lately-weaned child is attacked with whooping-cough, or any other severe disease, it may be necessary to give it the breast again; or should a weaned child refuse artificial food, and pine away under the deprivation, a breast of milk should be provided for it, if the family medical adviser deems this desirable. See *Infants, Food*.

WEB. The old English name for opacity of the eye, because it seems like a fibre, or Web spread before the sight. See *Eye*.

WEIGHTS. Those used in the weighing and dispensing of medicines are termed *Apothecaries' Weights* (which see). By

Atomic Weights is understood the definite proportions, by weight, in which different bodies combine. This relation, which is supposed to exist amongst the *Molecules* or *atoms* of compound bodies, constitutes the basis of the Atomic theory, first proposed by Dr. Dalton. See *Atom*.

WEN. An encysted tumour, whose seat is the cellular membrane of any part of the body; it is moveable, has a pulpy feel, and varies in size, but seldom exceeds that of an egg. Wens present the following varieties: 1st *Steatoma*, adipose; *Atheroma*, mealy; 3rd *Mellieeris*, honied; 4th *Testudo*, horny; 5th Ganglionic Wen.

With regard to the *treatment* of Wens, Dr. Graham observes, that although it is not often any advantage arises from the use of local applications, yet sometimes "a strong stimulant applied frequently to the surface will disperse them, when small and recently formed; and of all stimulants, electricity appears to be the most efficacious. Those who wish to try it may have sparks from the battery, and slight shocks passed through it daily. A very strong solution of salt and water is likewise a powerful stimulant in some cases of Wens, and has been known to bring them away by causing the cyst to open and discharge its contents. The surface of the Wen must be bathed with this solution very frequently every day. No benefit can be expected in less than a fortnight, and sometimes not sooner than a month or two. I am disposed to think this remedy worthy of more attention in these cases than it has yet obtained. The great advantage attending it is, that it gives no pains or inconvenience of any kind. The operation of removing Wens by the knife is attended with much less pain than is generally supposed. See *Tumours*.

WHEAL WORM. The *Aearus Autumnalis* or *Harvest Bug* (which see); it is so called from the glassy wheals which its bite produces.

WHELK. The name given to an unsuppurative tuberculous tumour, generally occurring in the face. See *Tumour*.

WHEY (in Latin *Serum lactus*). The fluid part of milk which remains after the curd is separated. See *Beverages*, *Milk*.

WHITE GUM. A kind of gum rash to which infants are liable, in which the pimples are minute, hard, and whitish, surrounded by a reddish halo; the scientific name is *Strophulus Albidus* or *Tooth Rash*.

WHITEHEAD'S ESSENCE OF MUSTARD. This nostrum has long maintained a place in popular esteem, as a remedy for flatulency and other disorders. Dr. Paris says

it does not contain a particle of Mustard; but according to Brande, it contains Camphor, Turpentine, Spirit of Rosemary, and a little Mustard Flour.

WHITE SWELLING. A dropsical accumulation within the capsular ligament of a joint, generally that of the knee. See *Housemaid's Knee*, *Hydarthrus*, *Knee*.

WHITES. The common or vulgar term for the discharge of a yellowish white mucus from the vagina. See *Leucorrhœa*.

WHITLOW. An inflammation at the end of one of the fingers or thumbs, very painful, and much disposed to suppurate. The effusion may be immediately under the skin, or deeper among the tendons; or it may press on the periosteum; this last is the worst, and most malignant form, it is consequently called *Felon*. The excessive pain and irritation which attend a Whitlow, is due chiefly to its situation under the nail, and the thickened skin at the end of the finger or toe, which, from its unyielding nature, confines the inflamed part, and prevent the quick discharge of the matter formed.

Whitlows generally arise from pricks or bruises, or other injuries of a local nature; but with some they occur so frequently, as to prove that they are, in a measure, constitutional.

Treatment. The chief point is to soothe and soften the part affected by the free use of warm fomentations and poultices, to render the nail and skin supple, and favour the formation and discharge of the matter. When there is much inflammation, a leech or two may be applied to the swelling; and if the pain causes deprivation of rest, a Calomel and Opium pill, containing a grain of each, may be taken at bed time, and a gentle aperient draught in the morning. If the abscess does not burst of itself, after the above measures, it should be opened with the lancet; the nail should be pared away as thin as possible, and any loose portions of it removed. Warm poulticing should be continued a couple of days, or so after the Whitlow is opened, and then a dressing of simple cerate should be applied, changing it about every eight hours; if this treatment should not suit, use Turner's cerate; or try water dressing. A small blister is sometimes necessary to promote an increased discharge, and give a salutary stimulus to the diseased parts; it may be kept on about twelve hours, and the raw surface, when it comes off, dressed with Spermaceti Ointment. When the Whitlow is seated among the tendons, there is excruciating pain, but little swelling of the affected finger, although there may be of the hand

and wrist, and perhaps of the whole fore arm; this requires a free incision made very early, and only a surgeon can treat the case.

It is not advisable to apply caustic to any fungus or proud flesh which may arise in these cases; they will disappear if the wound can be stimulated to healthy action.

WILDFIRE. A popular name of an eruptive disease, scientifically called the *Lichen Circumscriptus*, or Clustered Lichen. *Wild Fire Rash* is a species of Gum Rash, in which the pimples are in clusters, or patches, generally flying from part to part; (see *Strophulus*.) Another form of eruptive disease described by Celsus, under the name of *Agria*, is called *Wild Lichen*; scientific name, *Lichen ferus*. See *Lichen Rashes*.

WILLOW. The common White or Huntingdon Willow (*Salix Alba*) is, perhaps, more rich than any other member of the



order *Salicaceæ*, although all have it, in the peculiar crystalline principle, called *Salicine*, whose tonic and febrifuge properties are set forth under that head.

WINE. Strictly and especially we apply this term to the fermented juice of the grape, but it is generally used to denote that of any sub-acid fruit. "The presence of tartar," says Dr. Graham, "is, perhaps, the circumstance by which the grape juice is distinguished from all the other sub-acid fruits that have been applied to the purpose of wine-making. The juice of the grape, moreover, contains within itself all the

principles essential to vinification, in such a proportion and state of balance as to enable it at once to undergo a regular and complete fermentation; whereas the juices of other fruits require artificial additions for this purpose; and the scientific application and adjustment of these means constitute the art of making Wines. It has been remarked that all these wines, which contain an excess of malic acid, are of a bad quality; hence the grand defect that is necessarily inherent in Wines of this country, which leads them to partake of the properties of cider; for, in the place of *tartaric*, the *malic* acid always predominates in our native fruits. Notwithstanding these differences, the essential components of all Wines are the following:—one or more acids, especially the malic acid and tartaric; *extractive matter*, which in old wines is deposited with the tartar; a *volatile oil*, on which the flavour depends; *colouring matter*, and *alcohol*, or Spirit of Wine, the most important of all the ingredients.

"Wine, when good, and of a proper age, is cordial and tonic; but when new it is flatulent, debilitating, and purgative, and intoxicates sooner than old Wine. In a dietetic point of view, the temperate use of it promotes digestion, and gives additional energy to the action of the heart and arteries, strengthens the animal functions, exhilarates the spirits, sharpens the wit, and calls into action all the intellectual powers; but when taken in excess it intoxicates, producing head-ache, sickness, giddiness, and looseness, with universal tremors, which continue for two or three days; and, like ardent spirits, its habitual excessive use extinguishes the faculties of both mind and body, producing indigestion, emaciation, and debility, inflammation of the lungs and liver, palsy, gout, dropsy, and a long train of diseases and wretchedness. In almost all cases of indigestion, bilious complaints, and other disorders, in which there exists great weakness of the stomach, the white Wines will be found preferable to the red; they sit easier on the stomach, and do not tend to confine the bowels, as the latter do, which are material points, worthy of much attention.

"As a remedy, Wine is stimulant, tonic, and anti-spasmodic. Its chief medical application is in the treatment of fevers of a malignant type, to support the strength of the system in the advanced stages, and to obviate the symptoms arising from debility. With these views it is sometimes given with more advantage than any other tonic—

a superiority derived from its stimulating power being obtained with more certainty, and being more easily regulated by due administration; from its being more grateful; and probably not requiring to be assimilated by the digestive organs to produce its effect. The quantity to be given is dependent on the state of the disease: the object to be obtained is that of supporting the strength of the system until the fever has run its course: the danger to be avoided is that of giving it so largely as to occasion any degree of exhaustion. The administration is regulated, therefore, by the effect it produces; advantage being always derived from it when it renders the pulse more slow and firm, when the occurrence of delirium is prevented, when irritation is lessened and sleep induced. If the pulse be quickened, and the countenance become flushed; if it excite thirst, increase the heat of the body, and occasion restlessness or delirium, it is obviously injurious, and the dose must either be diminished, or its use suspended. In typhus, the proper rule is to give it till the pulse fills, the delirium abates, and the extremities warm; and it should be repeated on the smallest appearance of stupor, quick and sinking pulse, or tremor. A few glasses given in the space of 24 hours will often produce all that is required from Wine; but sometimes very large quantities are necessary. In malignant sore throat a woman unaccustomed to Wine has taken three bottles of Madeira every day for some time with marked advantage.

"In extreme ulceration, or gangrene, Wine is not only the best addition to Peruvian Bark and Opium, but is a remedy on which alone there is much reliance; and in the convalescence from all severe diseases, it is an efficacious means of restoring the exhausted strength and vigour.

"When Wine is prescribed as a cordial in a state of recovery from any acute disease, or in a weakened state of the habit, it should not be taken with dinner, or any other meal, but at noon, on an empty stomach. In such a case, it is an excellent practice to get a crust of good bread, dip it piece by piece into a glass of very old rich Wine, as Canary, Tent, Madeira, Sherry, or Port, and take it every day about twelve; it is a valuable cordial. Sometimes, in convalescence from severe disease, the nerves are so irritable as to produce a fretfulness in the system on the application of stimulants; then the quantity of wine used must be small, and Claret, Moselle, or Hock will be found the best sort."

After remarking on the adulterations to which Wines are subjected, Dr. Graham, our authority, proceeds:—

"To detect adulterated Wines we must attend to the following particulars:—Every white or straw-coloured Wine, of a sweetish taste, afterwards astringent, and at the same time new; every Wine that has an unusually high colour, not in proportion to its strength and age, or the flavour of brandy, penetrating the tongue; or, lastly, an uncommon strong flavour, may be justly suspected of adulteration. Red Wines, either of a very deep or a very faint colour; or of a woody or tart taste; and those which cover the whole of the glass, as well the bottom of the bottles, with a red sediment, are generally tinged with some colouring substance.

"In order to discover whether suspected Wine contains any metallic adulterations, we are possessed of an excellent chemical test, discovered by Professor Hahnemann of Germany, and known by the name of *Liquor Vini Probatorius*. It is prepared as follows: 1 drachm of the Dry Liver of Sulphur, and 2 drachms of Cream of Tartar, are shaken taken together in 2 ounces of distilled water, till it be completely saturated with hepatic gas; the liquor is then filtered through blotting paper, and kept in a close-stopped phial. From 16 to 20 drops of this liquid are dropped into a small glass, filled with suspected Wine; if this turn only thick, with white clouds, and deposit only a white sediment, we may be certain that it contains no metallic ingredient whatever; but if it turn black, or even muddy; if its colour approach to that of a dark red, if it have first a sweet and then an astringent taste, it is certainly impregnated with sugar of lead, or some other impregnation of that metal, equally destructive. If, however, the dark colour be of a blue cast, not unlike that of pale ink, we may expect the Wine to contain iron. Lastly, if the Wine be impregnated with copper or verdigris, it will deposit a sediment of blackish-grey colour. This experiment ought to be made with a freshly prepared test, and in the open air. See *Beverages, Drinks, &c.*

WINTER'S BARK. The bark of a tree, called by botanists *Drymis Winteri*, of the natural order *Magnoliaceæ*, has stimulant and aromatic properties, and may be used for similar purposes as cinnamon and canella bark; it is said to be good in scurvy, vomiting, and paralysis, and may be so for dyspepsia.

WINTER GREEN. The botanical name of this plant is *Ganetharia Procumbens*, it belongs to the heath family *Ericaceæ*. It is

called in North America, where it is indigenous, Deer Partridge and Tea-berry; also Mountain Tea, the leaves in a dried



state being used as a substitute for the Chinese plant; they are also used medicinally, acting as stimulant aromatics, astringents, and emmenagogues; they are said to be chiefly useful in chronic diarrhoea, owing to the large quantity of tannic acid which they contain, and are sometimes given with the view of increasing the secretion of milk. The whole plant has an aromatic odour and taste, owing to the presence of a volatile oil which is generally used by medical practitioners. It requires to be administered with caution.

WOLFFIAN BODIES. Substances by which the kidneys are preceded in the embryo, and which were first observed by Wolff; hence the name. They are commonly called *False Kidneys*.

WOMB. This most important organ in woman is situated in the cavity of the pelvis: from whence, when distended in pregnancy, it rises into the abdomen, with the general lining membrane of which and the pelvis, called the peritoneum, it is covered; it is of a flattened pear shape, and is held in its place by elastic ligaments; in its unimpregnated state it is about 3 inches in length, by two in breadth across the broadest part, and one in thickness. At the period of puberty it weighs about $1\frac{1}{2}$ ounces; after parturition from 2 to 3 ounces; and in the ninth month of utero-gestation

from 2 to 4 pounds; it is supplied with glands, vessels, and nerves, the latter of which constitute an extensive network over its entire surface. Dr. Lee observes:—

“Dissection proves that the human uterus possesses a great system of nerves, which enlarges with the coats, blood vessels, and absorbents, during pregnancy, and which returns after parturition to its original condition, before conception takes place. It is chiefly by the influence of these nerves that the uterus performs its varied functions of menstruation, conception, and parturition, and it is solely by their means that the whole fabric of the nervous system sympathises with the different morbid affections of the uterus. If these nerves of the uterus could not be demonstrated, its physiology and pathology would be completely inexplicable.”

Under the head of *Pregnancy, Menstruation, &c.*, we have already spoken of some of the affections to which the Womb is liable. It may be the seat of inflammation, in which case there will be the usual local and constitutional symptoms of inflammatory affections, and the same treatment will be required: unnatural enlargements, tumours, polypus, are also among the diseased condition of the Womb, in which we may include cancer, which chiefly affects the neck of it. Then we have displacements of the organ, in which it falls backwards, forwards, or downwards, the latter is commonly called “falling,” or “bearing down;” (see *Prolapsus*, also *Pessary*). This is very common among women of the lower orders, who have borne many children, and arises chiefly from want of care and attention after labour; the ligaments which ought to retain the organ in its place become relaxed, and remain permanently so. Displacement of the Womb is not unfrequently a consequence of allowing the bladder to become unduly distended. To the medical man alone should be entrusted the treatment of all such cases; they are necessarily obscure, and the general symptoms of many of them the same; these are a sensation of uneasiness and weight about the part; there is an almost constant dragging pain; imperfect or irregular performance of the functions of the bladder; difficulty in emptying the bowels; sometimes discharges of blood or matter; and not unfrequently great nervous irritation, resulting in hysteria, dyspepsia, obstinate vomiting, &c. Rest in a recumbent position, warm fomentations of the part, leeches if necessary; bandages and other mechanical means of support;

gentle aperients; sedatives and emollient medicines are the only general remedies which can be recommended. Very commonly an examination will be required, and no sensible or pure minded woman will refuse this, however repugnant it may, and must be, to her feelings. She must, of course, have confidence in her medical attendant, or she will not permit it. Into much of the minutiae of uterine diseases, it would be impossible to go in a work on this; they can never be understood, nor properly treated, by a non-professional.

WOODS. A term often applied to the medicinal woods generally, such as Guaiacum, Mezereum, Sarsaparilla, &c.

WORMS. There are several kinds of these troublesome parasites which infest the intestinal canals of man; those most generally found there are the *Ascarides*, small Thread Worms, varying from the eighth of an inch, to one and a half inches, in length; they are mostly in the rectum, or last gut. The *Lumbrici* are long round Worms, from 2 or 3, to 10 or more inches in length; they are of a yellowish white, or brownish red colour, and are usually found in the small intestines. The *Tænia*, or Tape Worm, occupies mostly the upper part of the intestinal tube, but is occasionally found in every part of it. There are two sorts of *Tænia*; one, the commonest (for cut of this see Vol. I., p. 311), frequently grows to an enormous length (as much as 30 or 40 feet), and generally comes away entire; the other passes off in one or more joints, which resemble pumpkin seeds.

As may be expected, from the highly organized and sensitive parts which they occupy, Worms cause great constitutional derangement, resulting in all kinds of bad symptoms, more especially affecting the stomach and head; hence we have in these cases variable appetite, sometimes deficient, at others absolutely voracious; pains in the stomach, foetid breath, nausea, head-ache, vertigo and giddiness, irritation about the nose and anus; frequently cough and disturbed rest, and a disordered state of the bowels. In children we have a hard and tumid belly, with slimy stools, and sometimes convulsive fits. Occasionally in adults, as well as children, Worms give rise to epileptic fits, and cause great emaciation.

An excessive use of fruit and vegetables, or sugar, or any other highly nutritive substance, favours the generation of Worms, which most frequently infest those of a relaxed habit, with weak digestive organs; the greater indulgence in sweets, and too common abstinence from salt, appears to be

the main reason why children are most troubled with them.

Worms are more common in some countries and districts than others, and it has been noticed that they are particularly so in parts where much milk and cheese are taken. It has been asserted, that a habit of eating meat in a partially raw state will be pretty sure to produce them.

Treatment. This must be of a tonic and strengthening character; such medicines as tend to invigorate the system are the best, and especially those which act upon the stomach and intestines; Salt, preparations of Iron, Sulphur, and Camphor, are those which may be principally depended on, in conjunction with an avoidance of vegetable and saccharine food. About 1 ounce of common Salt dissolved in nearly $\frac{1}{2}$ a pint of water, and taken in the morning fasting, twice a week for some little time, will generally bring away any kind of Worms, if the plan is followed out, especially if a pill containing 1 grain of Calomel and 3 of Extract of Colycinth, be taken at bed-time the previous night. At the same time should be taken a strengthening mixture, composed of Sulphate of Iron, 12 grains; Infusion of Quassia, 12 ounces; Tincture of Ginger, 2 drachms. Dose, two table-spoonsful twice a day. Or else, Sulphate of Iron and Quinine, each 12 grains; dilute Sulphuric Acid, 24 minims, Cinnamon Water, 12 ounces: dose as above.

For Tape Worm, Castor Oil and Spirits of Turpentine is often given; about $\frac{1}{2}$ an ounce of the latter, and 2 drachms of the former, is the dose: it should be taken fasting, and may be repeated two or three times, at intervals of two or three days or so. Pomegranate Bark is a very old and useful remedy for this kind of worm: the mode of administration is to boil 2 ounces of the bruised bark in $1\frac{1}{2}$ pint of water, down to a pint, the whole of which is to be taken in the course of the morning, fasting, in four draughts, with intervals of half an hour between each. Should this not be effectual the first day, it may be repeated two, three, or even four times. Another remedy is the Oil of Male Fern (for mode of administering which see *Fern*); and another, substance called *Kousso* (which head also see). Rue, Tansy, Tin Filings, Tobacco, and a variety of other substances, have likewise been recommended, but those mentioned appear to be the most efficacious. For the species called *Lumbrici*, the bursting pods of the *Cowhage* (which see) are no doubt useful; and for the small white thread Worm, so frequently infesting the

last gut of children, about $\frac{1}{2}$ a pint of Lime Water should be injected once a day, and an active aperient pill, or powder, or a dose of Castor Oil, be given once a week. Should this not effect the desired object, inject a solution of Salt in water, or a strong decoction of *Worm Seed* (which see):

Ching's Worm Lozenges, and most patent medicines used for the same purpose, are composed generally of Calomel, with Scammony, or some other drastic purgative.

Although salt is recommended as a remedy for Worms, yet salt meat is not good for persons so troubled: plenty of it should be eaten with fresh animal food, and the few vegetables that may be taken; but it is better to avoid these altogether for a time, as well as fruit, and live chiefly upon bread and farinaceous puddings.

WORMIAN BONES. The triangular bones sometimes found in the course of the suture of the parietal and occipital bones, and first described by Olaus Wormius, hence the name: anatomists call them *Ossa triquetra*.

WORM SEED. Under the several heads of *Santonica*, *Strigelia*, and *Southernwood* (see *Wormwood*), we have already spoken of anthelmintics which have this popular name. The plant here figured is the *Ery-*

monly called Jack-by-the-Hedge and Sauce alone, which has a strong odour of garlic,



simum Cheroides of botanists, whose seeds have likewise a reputation for destroying Worms. It belongs to the natural order *Cruciferae*, and is nearly allied to the Hedge Mustard, *Erysimum Augustifolium* (also here figured), and also to the plant com-

and was formerly eaten by country people, in sauces, with boiled meat, bread and butter, &c. Botanists term this latter plant *Erysimum Alliaria*.

WORMWOOD. This plant, the *Artemisium Absinthum* of botanists, belonging to the natural order *Compositae*, has long been a popular remedy for worms; hence its common name: it has a strong penetrating odour, and a bitter and aromatic taste, which is owing to the presence of a volatile oil, which, as well as the dried tops, is given as a vermifuge, as a bitter tonic, antiperiodic, and emmenagogue. Externally the plant is used in discutient and antiseptic fomentations. The dose of this Powdered Herb is from 20 to 30 grains; of the Essential Oil, from 2 to 4 drops; of the Extract, from 5 to 20 grains.

Salt of Wormwood, formerly much used medicinally, is impure carbonate of potash, obtained from the ashes of this and other plants.

The Sea Wormwood (*Artemisium Maritimum*) has similar properties to the above, but is seldom used. The common and Chinese Mugworts (*A. Vulgaris* and *A. Chinensis*) belong to the same genus of plants, as do also the common and Tartarian Southernwood (*A. Abrotarum*, and *A. Santonica*): they have a general agree-

ment in their properties; the broken flower-buds and stalks of the latter are



commonly sold under the name of Worm Seed. See *Santonica*.

WORT. The Teutonic word for herb. Hence the names of many plants, such as Lungwort, Liverwort, St. John's Wort, &c.

WOUNDS. A recent solution of continuity in any soft part of the body, occasioned suddenly by external causes, and generally attended with hemorrhage at first, is a wound. It may be one or the other of six kinds. 1st an *Incised Wound*, made by a sharp instrument, effecting a simple division of the fibres. 2nd a *Lacerated Wound*, one in which the fibres, instead of being cleanly divided by a sharp instrument, are torn asunder by violence; the edges in this case are not straight, but jagged and uneven. 3rd a *Contused Wound*, one made by a violent blow from some blunt instrument, or unyielding surface; this resembles the preceding; 4th a *Punctured Wound*, one made with a narrow pointed instrument, as a sword or bayonet. 5th a *Poisoned Wound*, such as the bite of a viper, mad dog, &c., or a slip of the lancet in dissecting bodies in a state of decomposition. 6th *Gunshot*

Wounds, one caused by a bullet, or other hard substance, propelled from a musket.

The *treatment* of Wounds, must of course, depend very much upon their character; if it be a clean cut or chop, we should first staunch the blood, by bathing it with cold water, cleaning away any extraneous matters with a soft sponge; then bring the edges of the Wound together so that they shall unite evenly, and fix them so, with strips of adhesive plaster; a space being left between each slip for the escape of any blood or matter which may form. Should the Wound be of any great magnitude, so that the edges gape when unconfined, they should be drawn together by means of two or three stitches; in making which, a threaded needle (a curved one) should first be passed through the flesh, inwards, about a $\frac{1}{4}$ of an inch from the edge of the Wound, then on the other side outwards; the ends of the thread are then to be brought together and tied tightly; the stitches should be an inch or more apart, they must not be drawn or dragged together with great force, or they may cut through the parts, nor must they remain in too long, or they may cause irritation: from two to four days will be sufficient for them to answer every useful purpose; between them, strips of adhesive plaster should be placed, and if a limb, a roller bandage should cover the whole. If the plaster is not readily procurable, a piece of linen may be bound round, and smeared with white of egg. Should the Wound become painful and throb, and the patient feel chilly and uneasy, it is likely that there is matter forming which requires a way of escape; in this case remove the plaster by washing it with a sponge dipped in warm water; then either put on a warm poultice, or lint, dipped or saturated with warm water, with a piece of oil skin over it, to prevent rapid evaporation, this mode of operation should be continued until pain and inflammation cease, and nothing but healthy pus is discharged; if any, simple strapping with adhesive plaster will then do.

A *stab* which goes deep is more difficult to heal than a surface incision, because, even if it does not injure an important organ, it may lead to the formation of matter amid the under tissues, when the Wound is closed at the top, and for this a way of escape must be made.

A *lacerated Wound* caused by a hook or blunt instrument, should be first sponged clean, the torn portions laid in their natural positions as nearly as possible; then the edges of the Wound brought together by strips of sticking plaster, putting over the

whole a thick layer of lint dipped in cold water, and bandaging just tight enough to keep the dressing secure; the lint should be kept moist.

In *bruised Wounds* there is generally some sloughing of the injured parts; to remove which warm poultices are necessary, otherwise they may be treated like clean cuts. When the sloughing is over, and healthy granulations begin to form; apply water dressing, and adhesive plaster as above.

In *gunpowder Wounds* there is often both bruising and laceration, and sometimes burning also; seldom much bleeding unless a large vessel is injured; in the latter case, pressure must be applied for a time, however painful; if it be a vein or an artery, it must be taken up and tied as directed under the head *Artery*; if there is not this complication, the treatment should be the same as that prescribed for torn or bruised Wounds.

Punctured Wounds from thorns or splinters often lead to serious results; if the offending substance can be drawn out, by means of a needle or a pair of tweezers, it should be done; if not, poultices will assist in removing it, and keeping down the inflammation which is sure to arise from its presence amid the tissues; there will most likely be a small abscess formed, and when this is opened, and the matter discharged, the thorn or splinter will probably come with it, or may be removed. Sometimes from this apparently slight easue we have *Tetanus* or *Lock Jaw* (which see); or an irritative fever as the result of the inflammatory action, the treatment must be based upon the supervening symptoms; generally leeches, active aperients, and the same as that for *inflammation* will be required.

Wound from a fish, or crochet hook. This is not generally very difficult to heal, unless the system is in an unhealthy condition, in which case a mere scratch will suffice to set up inflammatory action; the great difficulty is the first, that of extracting the instrument, which, on account of its barbed point, cannot be drawn out in the ordinary way: a slight incision will therefore be necessary; if the hook has no handle, or one that can be taken or cut off, the best plan is to depress the blunt end so as to cause the barbed point to penetrate the integument upwards and make its way out; then take firmly hold of the point, and through the fresh opening made by it, draw out the whole of the hook; if this cannot be done, a slight cut, as far as the point has

penetrated, will be necessary; and then a little careful manipulation will free the hook; afterwards strapping and cold water dressing should be applied, or a poultice if there is much inflammation.

For Wounds and Lacerations of the Scalp.—Surgeons are now pretty generally assured that the best treatment is to free the torn piece from dirt or foreign bodies, and restore it as quickly as possible to its natural situation, no cutting away of any part (as practised formerly) is now advised, and sewing is scarcely ever necessary; let the hair be cut or shaved off round the wound, draw the edges together with strips of adhesive plaister, and apply over it cold water dressing.

For treatment of Wounds in other parts of the body, and the erysipelatous symptoms shall frequently accompany them, see heads of the various parts in which they are likely to occur, and *Erysipelas*.

WOURALI. A poisonous preparation made by the American Indians from the Wourali or Ururi vine (*Strichnos Toxifera*), whose bark, together with the juice of several other plants, is subjected to a peculiar process of boiling, and reboiling, to extract and prepare the principles on which the poisonous effect depends. This poison, with which the Indians tip their arrows, acts virulently when affecting the blood, while in small quantities it may be taken into the stomach with impunity. It has been suggested as a remedy for both locked-jaw and hydrophobia, but can scarcely be recommended without greater experience of its effects.

WRIST. (In Latin *Corpus*. See *Hand*.) The wrist is chiefly liable to sprains and dislocations; for the reduction of the latter it is necessary for one person to grasp the forefinger and hold it steady, while the principal operator extends the patient's hand, by either taking hold of the forefingers, or of a handkerchief applied above the joint of the thumb. As soon as sufficient extension is made, the muscles will direct the bones into their proper places. Then the wrist should be bound up with a wet roller, and splints applied, one behind and one before, reaching to the roots of the fingers. See also *Sprains*.

WRY-NECK. An involuntary and fixed inclination of the head towards one of the shoulders. See *Neck*.

XANTHOS (Greek for yellow). Hence the terms *Xanthic Oxide*, a species of calculus observed by Dr. Mareet, and so named from the lemon-coloured compound which it forms from the action of nitric acid; *Xanthogen*, is a term applied to the radical

of *Hydroxanthic Acid*, from its property of forming yellow compounds with certain metals; *Xanthorrhiza*, yellow root, the root of the *X. Apiifolia*, a North American plant, reputed to be an excellent tonic, but not used in this country; *Xanthoxylum*, the Prickly Ash (*X. Fraxineum*), used in the United States in chronic rheumatism.

XEROPHTHALMIA (*xeros*, dry, and *ophthalmos*, the eye). A form of ophthalmia, denoting the dryness of the eye in a particular stage of the affection. See *Eye*, *Ophthalmia*.

XIPHOID (Greek *xiphos*, a sword, and *eidos*, likeness). Sword-like; applied to the cartilage of the sternum, on account of its shape.

XYLOBALSAMUM (Greek *xylon*, wood, and *balsamum*, balsam). A balsam obtained by a decoction of the twigs and leaves of the *Amyris Gileadensis*, in water. It is thicker and less odoriferous than the *Balsamælon*, or Oil of Balsam, which is prepared in much the same way, but by a quicker process.

YAM. The roots of the *Dioscorea Sativa*, or Cultivated Yam, and of the *D. Alata*, another species, are much used as an article of food in the East and West Indies, and in America; they contained a great quantity of starch, and, when well cooked, are tolerably nutritious.

YAVA-SKIN. In the Polynesian Isles this is the name by which Elephantiasis, or Barbadoes leg, is called, because it is supposed to be originated by drinking the heating beverage called *Yava*. Like the gout among ourselves, it is regarded in a sort of honourable light.

YAW (the African name for a raspberry). Applied to the disease *Frambæsia* (which see).

YEAST. A substance generated during the vinous fermentation of vegetable juices and decoctions, rising to the surface in the form of a frothy, flocculent, and somewhat viscid matter; its chief use is to promote fermentation, but it sometimes forms the chief ingredient in *Poultices*, (which see).

Yeast was at one time in high repute as an antiseptic in typhus fever, and is worthy of some confidence. It is well suited to domestic practice, since it is a simple remedy, and easily procured. It is said that a son of the Earl of Essex was given over by Dr. John Willis in typhus fever, and afterwards restored by sponging the body with vinegar, and using yeast internally by mouth and elysters. One of the best modes of giving this article is in an infusion of malt, a combination from which Dr. Haygarth, of Chester, says that he has derived great advantage in the treat-

ment of putrid fever. A teaspoonful of yeast is mixed with a pint of strong wort, and the vessel then covered close and placed near a fire. In less than an hour it is covered with a white cap of yeast, and should be drunk in that state. One or two pints of this mixture must be taken, in divided doses, during the day. If good wort cannot be got from the brewer, the patient's friends may make it, by pouring a little more than two pints of hot water on two pints of malt, which, after it has stood closely covered for two hours, should be strained off for use. The water should not be poured on the malt boiling, but be allowed to cool for a few minutes.

Artificial Yeast may be prepared thus:—Boil a quantity of malt, and pour off the water, leaving the moist grains in a warm place to ferment. The bitterness, which frequently renders Yeast so unpleasant, may be taken off by straining the Yeast through a sieve or cloth, with a quantity of bran in it, or by dropping into it a small piece of bread, baked or toasted nearly black.

YELLOW FEVER. One of the several forms of malignant remittent which attacks people in warm climates; it is called yellow from the lemon or orange hue which covers the body, and the yellowish matter which is vomited at the commencement of the disease. See *Fever*s.

YELLOW WASH. A lotion for ulcers, formed by mixing Corrosive Sublimate and Lime Water together, in the proportion of 1 ounce of the latter to 2 grains of the former; the result is a precipitate of a deep yellow colour, which is a per-oxide of mercury, with a little muriatic acid.

YELLOW GUM. This is the jaundice of infants; the mildest form in which that affection presents itself. See *Jaundice*.

ZEDOARY. The roots of several plants of the *Zingiberaceæ*, or ginger family, are, in the tropical countries, where they chiefly grow, used medicinally as aromatic stimulants and vermifuges, and sometimes, although but rarely, in this country also.

ZEINE. A principle obtained from maize or Indian corn; of its peculiar proportions but little seems to be known.

ZERO (probably from the Arabic *tsaphara*, empty). This term, meaning nothing, is used to denote a cypher, and fill the blank between the ascending and descending numbers in a scale or series. Zero, in the thermometers of Celsius and Reaumur, is the point at which water congeals. The Zero of Fahrenheit's instrument is fixed at the point at which the mercury stands when immersed in snow and common salt,

and is 32° below the freezing point of water. In Wedgewood's pyrometer the Zero corresponds with 1077° in Fahrenheit's scale. See *Heat, Thermometer*.

ZINC. A metal known in commerce as *Spelter*, and obtained from calamine and blende, in the former of which it is combined with carbonic acid, in the latter with sulphur.

Its chief medicinal preparations are:—1st, the *Acetate*, which is rarely given internally, but is well adapted for astringent lotions and injections, being milder and less irritating than the sulphate; it is found to answer well in leucorrhœa and gonorrhœa, and also as a collyrium in ophthalmia; strength, $\frac{1}{2}$ a drachm to a pint of distilled water. *Carbonate*, commonly called Prepared Calamine, used to form plaisters and cerates, and ointments, for dressing wounds and ulcerations. (See *Turner's Cerate*.) *Chloride*, sometimes called Butter of Zinc, is one of the most powerful caustics known; has been given in small doses, but is generally used for external application, to destroy the surface of a cancerous or phagedænous sore, or the eruption of lupus, being safer than arsenious acid; for such a purpose, it is generally made into a paste, with flour, or combined with Chloride of Antimony.

Barnett's Disinfecting Solution, largely employed in hospitals, is made of the Chloride, in the proportion of 1 pound to 5 gallons of water; besides being a good deodorizer, it is said to prevent the dry rot in wood, and to preserve animal matter from putrefaction. A dilute solution may be used as a wash for foul ulcers, or scrofulous sores, or as an unction in gonorrhœa. *Cyanide* and *Ferro-cyanide*; these preparations have been employed in nervous and spasmodic disorders, dyspepsia, and neuralgia of the stomach, also for worms; dose from 1 to 4 grains, two or three times a day. *Iodine*, given internally in small doses for scrofula, also used to form a collyrium in scrofulous ophthalmia, and an ointment for friction in chronic glandular enlargement; its virtue is that of an astringent and alterative. *Sulphate*, or White Vitriol, given as an astringent in fluxes and hæmorrhoids; as a tonic in general debility; and as an antispasmodic in cholera, epilepsy, gastrodynia, hysteria, and neuralgia. In large doses it acts quickly as an emetic, without producing much nausea and prostration, as most emetics do; it is therefore well adapted for administration in cases of poisoning; for this purpose it may be given in $\frac{1}{2}$ drachm doses, repeated every $\frac{1}{4}$ of an

hour, in warm water; the dose as a tonic and antispasmodic is from 2 to 10 grains; in epilepsy, the dose may be greatly increased, from the minimum quantity to as much as will be borne without vomiting. This is one of the best astringent applications known, and is constantly used in collyria, gargles for relaxed uvula, injections for gonorrhœa, &c.; it makes a good injection for piles; strength 1 drachm to 1 pint of water. *Valerianate*; this salt has a strong odour, and taste of *Valerian* (which see); it is a powerful tonic and antispasmodic, and has been given with good effect in hysteria and neuralgia; dose from 1 to 2 grains. What is commonly called *Flowers of Zinc*, is in fact the oxide which flies up when the metal is exposed to a temperature in the air, a little above its melting point, in the form of a fine white flocculent powder; the ancients called this *Pompholix*; in Holland it was sold as a secret remedy under the names of *Arcanum Ludemanni* and *Luna fixata*; its real composition was first made public by Glaubius.

ZIRCONIUM, the metallic basis of *Zirconia*, a substance found in the jargon, or gircon, and also in the hyacinth.

ZOOGONY (Greek *zoon*, an animal, and *gone*, generation.) French *zoogénie*, under which term M. Serres treats of the laws which he supposes to regulate the formation of the organs, or according to which the different parts of which they are composed seem to be produced; these laws are two in number, the law of *symmetry*, and that of *conjugaison*, the first of which has been designated "the principle of the double development of the organs," and the last, "the principle of reunion of the organs."

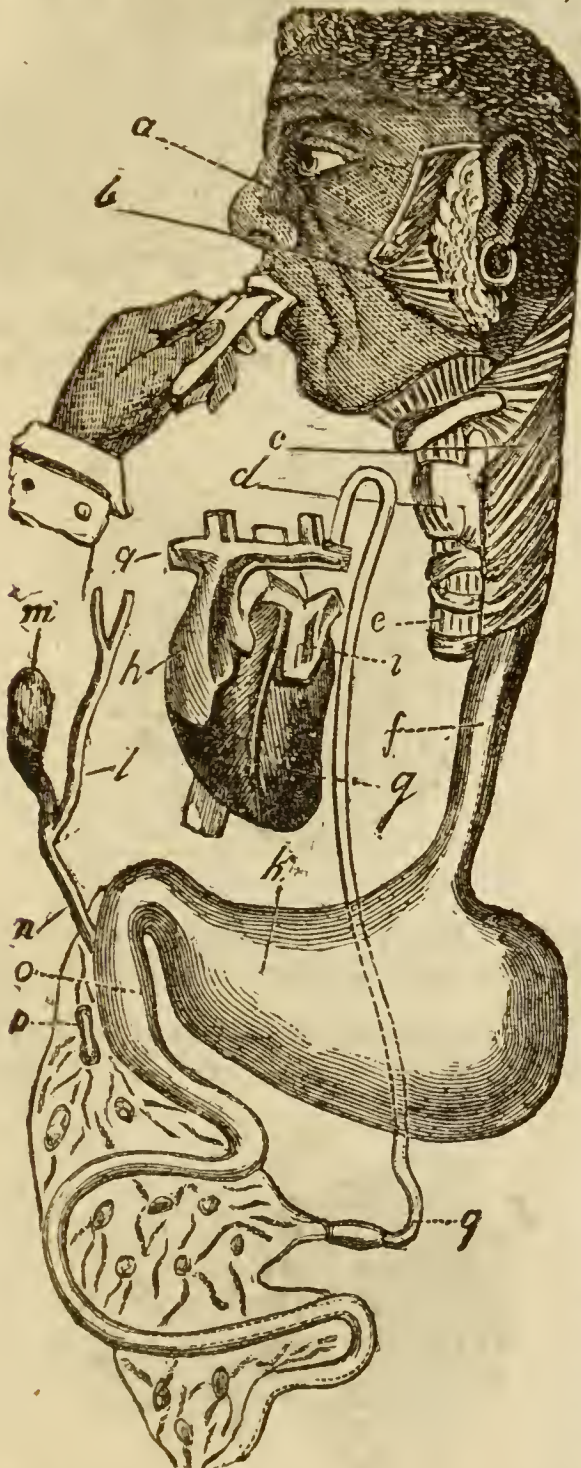
ZOOLOGY (Greek *zoon*, and *logos*, a description.) That branch of natural history which treats of animals. From this radical word *Zoon* we have several other terms, which, if not directly, are indirectly connected with the subjects discussed in this work. Such are *Zoogony* (see above); *Zoonic Acid*, acetic acid holding animal matter in solution; *Zootomy*, the anatomy, or dissection of animals, &c.

ZYGOMA (Greek *xygos*, a yoke.) The arch formed by the zygomatic processes of the temporal and cheek bones. The *Zygomatic Process* is a thin, narrow projection of bone, bounding the squamous portion of the temporal bone at its base; hence we have *Zygomaticus major* and *minor*, two muscles which raise the angles of the mouth, as in laughing; the term *Distortor oris* has sometimes been applied to them.

APPENDIX.

DIAGRAM OF THE PRINCIPAL ORGANS ENGAGED IN THE PREPARATION OF FOOD.

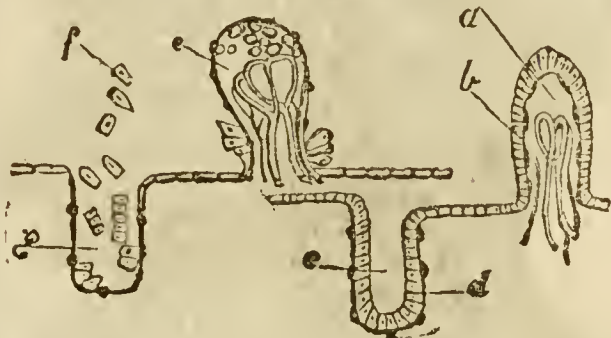
a, Muscles of the Cheek; *b*, Parotid Gland; *c*, Muscles of the Gullet; *d*, Larynx; *e*, Trachea; *f*, Gullet; *g*, Left Ventricle of the Heart; *h*, Right Auricle of same; *i*,



Left Auricle; *k*, Stomach; *l*, Pancreatic Duct; *m*, Gall Bladder; *n*, Common Duct; *o*, Duodenum; *p*, Mesenteric Glands; *q*,

Thoracic Duct (see these heads; also, *Alimentary Canal, Digestion, Food, &c.*)

PORTION OF MUCOUS MEMBRANE, from the alimentary canal of a human being. Elevation of the membrane, represented by *a* and *e*, are called *villi*; whilst *c* and *g* are depressions called Follicles; *d* and *f* represent Epithelium; *a* is Villous, when absorption is not going on; and *e*, Villous



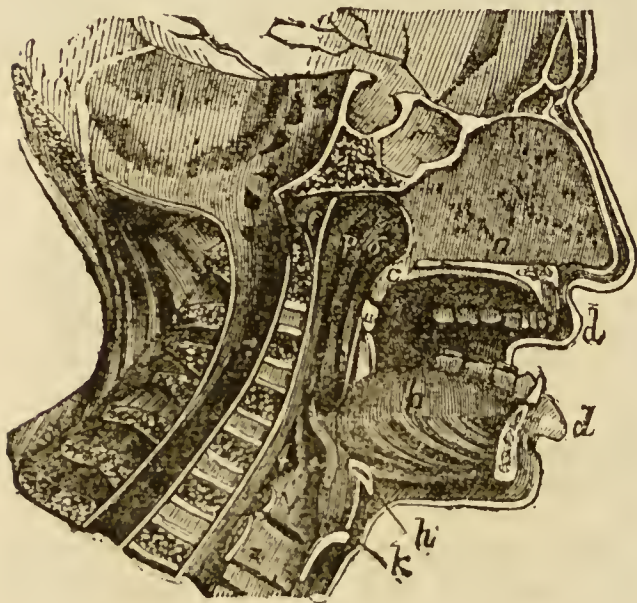
during digestion; *g*, Follicle, with the Epithelium loose (see *Mucous, Membrane, &c.*)

PAROTID GLAND OF A SHEEP; exhibiting the branched and lobulated character of



glands of the human stomach, and other parts (see *Glands*).

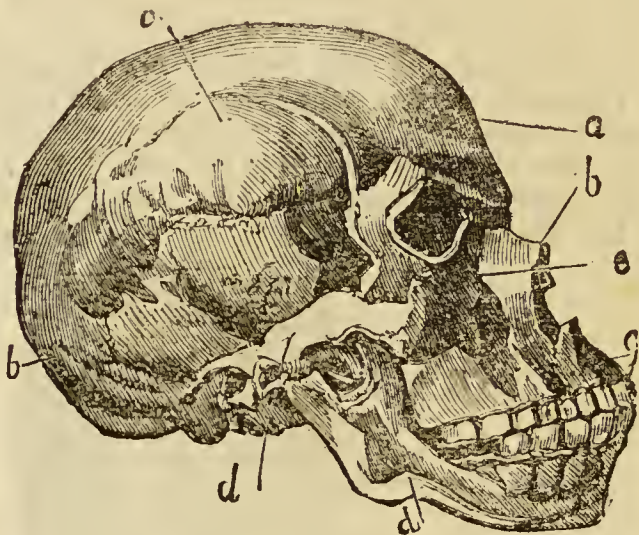
MEDIAN SECTION OF THE HEAD PASSING DIRECTLY THROUGH THE NOSE, MOUTH, PHARYNX, AND LARYNX. A septum of the nose which separates the two nostrils one from the other; below is the section of the bones which form the roof of the mouth called the hard palate; *b* the tongue, beneath are the muscles by which it is attached to the lower jaw and the bone of the tongue (*h*), *c* is the soft palate and pendulum, below it is the (*u*) uvula; *d d* are the upper and lower lips; *i* one of the



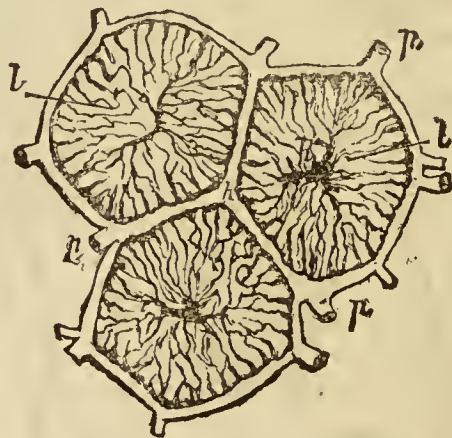
arches of the fauces or back part of the mouth, *p* Pharynx, forming the large cavity behind the soft palate, into which all the food is passed from the mouth; *k* thyroid cartilage which forms the sides of the Larynx, which is the organ of voice; *r* cricoid cartilage, which forms the lower part of the Larynx, and completely surrounds it; *v* that part of the Larynx called the glottis, which opens externally, and is covered by the epiglottis; *6* indicates the exact point at which the Eustacian tube opens into the Pharynx; *3* is the passage leading from the mouth into the Pharynx, called by anatomists the *isthmus faucium*; *4* is the opening from the Larynx into the mouth, and is covered just above by the epiglottis. Behind the whole of the parts described is the spine, along which the gullet runs into the stomach. See parts named, also *Ear, Head, Throat, &c.*

CONFORMATION OF SKULLS. Skull of a negro.—*a*, *b*, and *c* frontal, occipital, and temporal bones; *d* zygoma; *e* and *h* cheek and nasal bones; *f* and *g* upper and lower jaws.

This cut exhibits very strikingly the difference of conformation between the skull of a negro and that of the European races. See *Skull*.



LOBUS OF THE LIVER, showing Hepatic and Portal Veins: *p* branches of



Portal Vein; *l* Capillaries connecting Hepatic and Portal Veins; *h* Hepatic Veins.

LOBULE SHOWING THE HEPATIC DUCTS: *d d* the Hepatic Ducts; *b b* minute rami-



fications. See *Arteries, Blood, Liver, Veins*.

ADDITIONAL PLANTS.

A FEW errors, and omissions in placing some of the botanical cuts having una-



No. 1.

voidably occurred, we take this opportunity



No. 2.

of correcting the former, and supplying the latter. The plant which is here depicted is

the Common Juniper (*Juniperus Vulgaris*), spoken of at page 61 of Vol. II., where will be found a cut of the Savine (*Juniperus Sabina*), a nearly allied plant, whose medical properties are set forth at page 267 of Vol. II.

The next cut represents the White Poppy (*Papaverus Alba*), the variety from which *Opium* is obtained; (see that head, and *Poppy*).

The next (No. 3) is the Galbanum, a cut of which was not introduced under that head (see Vol. I., page 306), because there was some uncertainty as to the exact plant



No. 3.

which produced the gum resin, so called. There appears, however, no doubt that the above is one of the plants from which it is obtained; it is the *Galbanum Officinale*, and is a native of the west coast of Africa.

No. 4 is the Horse Radish, spoken of, but

not figured, at page 12 of Vol. II., whose acrid taste and stimulating properties are well known to most persons. We would take this opportunity of again impressing upon our readers the necessity there is for extreme caution when using the root of this plant for culinary purposes—that of *Aconite* having been sometimes mistaken for it. A comparison of the above cut with that given at page 17, Vol. I. (head *Aconite*) will show that there is a considerable difference in the foliage, blossoms, and growth of the two plants.



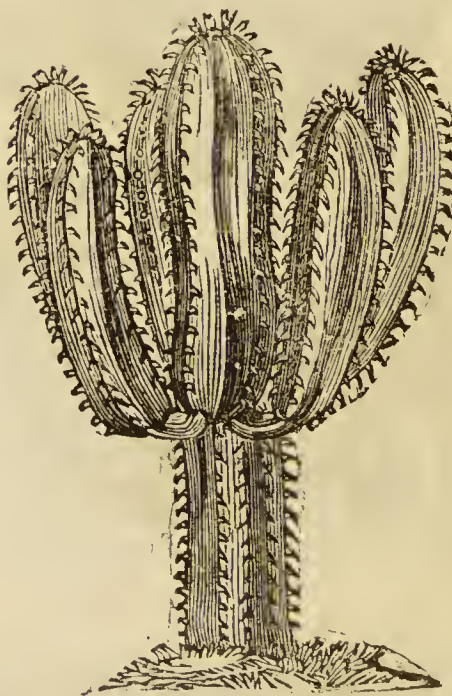
No. 4

No. 5 is the Gutta Percha, whose name is far more familiar to the public than the appearance of the plant, whose botanical name, &c., is given in Vol. I., page 342.

The curious-looking plant numbered 6 is the *Euphorbium Canariensis*, one of the large family of Spurges, from which the drastic gum Euphorbium is obtained (see that head, Vol. I., page 233). The plant there



No. 5.



No. 6.

figured is the Spurge Laurel — *Thymelia Pontica*.



No. 7.

Flea Bane (see Vol. I., p. 276) the plant there figured is the Great Throatwort (*Cam-*



No. 8.

panula Trachelium), a British herb, the bitter and somewhat acrid decoction of

which is used for a gargle in sore throats. Of Throat-worts we have several native species, all of which were formerly in good repute as medicinal herbs, although they are but little used now, except in some rural districts.

No. 8, is another cut of the Deadly Nightshade, already figured at Vol. I. p. 75. We wish to impress our readers with the outward characteristics of this highly poisonous plant. British herbalists distinguish no less than eighteen species of Pond Weeds. In No. 9 we have one of the most conspicuous of them, it is called the Broad-



No. 9.

leaved Pond Weed, which is common in our waters, putting out small whitish flowers, in long slender spikes in August. Some medical virtues are supposed to reside in its ribbed leaves and weak brown stalks.

No. 10 is the *Myrosperma Toluiferum*, the plant which yields the Balsam of Tolu, which is procured by making incisions in the bark during the hot season, and collecting it in spoons made of black wax. (For a full account of its medical uses and properties, see *Balsam*).

No. 11 is Paul's Betony, a common name | the Speedwells, it was formerly much 62-



No. 10.

of the pretty Germaculer Speedwell (*Veronica Chamodrys*), sometimes called Eyebright, and Cat's Eye; like the rest of



No. 11.

teemed for its real or supposed medicinal virtues (see *Veronica*).



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